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(DEPT OF MEDICAL STATISTICS)

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OF

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VOL. XV.

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LONDON SCHOOL OF HYGIENE
AND TROPICAL MEDICINE
(DEPT OF MEDICAL STATISTICS)

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QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

APRIL, 1852.

Statistics of the Farm School System of the Continent, and of its applicability to the Preventive and Reformatory Education of Pauper and Criminal Children in England. By Joseph Fletcher, Esq., *Barrister-at-Law, Honorary Secretary.*

[Read before the Statistical Society of London, 16th February, 1851.]

Among the various classes of facts, which, in the language of our original prospectus, are "calculated to illustrate the condition and prospects of society," there is none of more immediate interest or more general importance than that which, if studied without preconceived bias, may teach us how best to administer the grave trust involved in the custody of a pauper or criminal population, and especially of that portion of it whose youthfulness and plasticity of character render it probable that mismanagement on our part will be its total ruin, and entail upon ourselves no small weight of retribution. Solicitude in this matter is not limited to those who imagine that there is some power latent in the corporate being of "society" or "government" which ought to be used to the education of all, so that they shall of *necessity* be good citizens; and, placing themselves in high imagination aloof from all social ills, with folded hands, complacently reproach this corporate being for allowing their existence. It is even shared by many who would formerly have been content to use up human beings, of whatever age, by an instrumentality of mere punishment, in which they would have considered that the magistrate was simply doing the work which God had assigned to him, and with which it was no business of theirs to interfere. And it has long possessed the minds of, I trust, a still larger number, who, neither vainly denying the power of evil, nor vainly assuming to exercise divine justice without mercy, regard the criminal jurisprudence of a country as a mere code of human expediency, elaborated in supersedence of the personal conflicts which would otherwise tear society to pieces; and would fain see such collective efforts at self-preservation guided, like those of the individual, by principles of a recognized responsibility, in that conflict against sin and sorrow,—in that struggle for virtue and happiness,—into which we were born and baptized, from which there is no earthly escape, and which we can wage with success only so long as we wage it humbly, forgivingly, and earnestly. An improving moral

sense in the individual will often work the most important and happy changes in his course of action; and the time is perhaps arrived when an improving moral sense in society at large will find it equally consistent with policy and economy to distinguish between crime and the criminal, at least to the extent of leaving a chance of redemption to those who are not altogether hardened in their evil courses. Repression, of a severity as great as a scale graduated by the enormity of the offences will permit, is apparently unavoidable in dealing with those hardened both by age and habit; but if we would meet the greater proportion of those who ultimately become confirmed criminals at the very commencement of their evil courses, with a more merciful and more enlightened severity, they might in many cases be saved from a darker doom, and society from its ultimate infliction, after enduring a lengthened series of injuries.

That it is no small subject of solicitude to which it is desired to rouse the public attention, will appear from the fact that the number of prisoners in the gaols of England and Wales classed as "juvenile" in the prison-inspectors' returns was, in the course of the year 1849, no fewer than 12,955; of which number 1,431 were under 12 years of age, 2,912 from 12 to 14, and the remaining 8,617 from 14 to 17*. Although these were not in prison for the whole year, it must be concluded that there is more than this amount of juvenile population constantly on the verge of commitment, and virtually thrown upon society in a criminal character; and its near connexion with another vast mass to which society stands in parental relation (that of the pauper children), is but too painfully established by Colonel Jebb's assertion in his Report, dated the 14th of June, 1851, on the discipline and management of the convict prisons in 1850, that "it is from this mass that the convicts who fill our prisons are in a great measure recruited." "I cannot," he adds, "too strongly impress the vast importance, were it only in a social and economical point of view, of vigorous and systematic efforts of prevention, directed against the causes of crime, so far as they may be traced to the want of moral, religious, and industrial training for pauper children.†"

This moral relationship between the pauper and the criminal children is a painful fact, which we cannot witness with any degree of satisfaction; and, combined with their analogous economical condition (as being wholly supported by the benevolence or necessities of society at large, and not by the affection of parents or natural guardians), it compels us to take an enlarged view of the interests of both classes. The number of pauper children and young persons under sixteen receiving in-door support, as destitute of natural guardianship, and wholly dependent on society, was, in England and Wales, on the 1st day of January, 1850, no fewer than 26,841, being 23,596 orphans, or other children relieved without the parents being aided, 2,280 children of infirm pauper inmates of the workhouses, and 965 illegitimate children of such persons. The number of orphans or other children relieved out of the union workhouses, without the parents receiving relief, was, at the same date, no fewer than 17,854, and of children relieved out-of-doors, with their parents, as many as 37,161.

* Fifteenth Report of Inspectors of Prisons, Home District, 1851, p. 234.

† Report, p. 27.

Omitting the whole of the latter, as, we may hope, a temporary burthen, we have thus all the responsibilities of parentage resting upon society, in the guardianship of

Out-door orphans, &c.	17,854
In-door orphans, &c.	26,851
Juvenile Criminals, say only one year's crop	12,957
Making a total of	57,662

Those who are best acquainted with the mode in which we at present deal with this responsibility, will say least in its praise; and it is therefore a first duty to search the varied experience of our neighbours, in dealing with the like difficulties under somewhat varying circumstances, for some useful hints to guide us in the amendment of our own practice. A great body of this experience has been brought together in a perspicuous manner by our valued honorary member, M. Edouard Ducpetiaux, Inspector-General of Prisons and Institutions of Public Charity in Belgium, in a report to the Minister of Justice for that kingdom, containing the results of inquiries made principally with a view to the guidance of his own judgment, in carrying out the instructions of his Government for the organization of the great reformatory farm-school at Ruysselede. It is, in fact, a summary of the experience of all the principal systems of public charity tending towards farm industry rather than workhouse idleness; and of the efforts which, with growing intelligence, have inevitably grown out of them, to employ the hardiest and best forms of pauper training to the reformation of the juvenile delinquent also, when not already too deeply debased by crime. It will therefore be my first endeavour to give, as nearly as possible in the words of our author, such portions of his work as will rapidly convey to your minds its most important conclusions.

Classification of the Home Agricultural Colonies of the Continent.

Home agricultural colonies, he says, owe their origin to the efforts made, especially since the commencement of the present century, to relieve misery, resist the progress of pauperism, and give a moral training to the very poor. They tend to relieve the towns of their superabundant population, and stop the influx from the country; they give new life to industry by diminishing on the one hand competition for employment, and, on the other, augmenting the produce of food; and finally, they open a way to the reclamation of waste lands at home and the colonization of unoccupied wilds in foreign countries. Such, at least, has been their design.

The colonies which have been brought into existence are of two classes. 1st. Those which contemplate a provision for adults; and 2nd. Those which are directed to the training of children and young persons only. And these again are subdivisible, by reference to their contemplating, 1st, simply the maintenance and training of the destitute to habits of industry; or, 2nd, the actual reformation of those convicted of crime.

1. *Free Colonies, or Farm Workhouses* (*Fermes-hospices*).—These establishments, chiefly devoted to indigent adults, exist only in Holland and Belgium. In the former country, they constitute one of the

principal elements of the system of home colonization elaborated by General Van den Bosch, and carried on, but without success, by the Charitable Society of Holland. In Belgium, two considerable experiments have been made; one at Wortel, in the Campine of Antwerp, which has completely failed, and the other in Flanders, where the farm-workhouses for the aged, sick, and orphan, are in full and prosperous operation.

2. *Colonies for the Repression of Adult Mendicancy and Vagabondage.*—These are but few; and several have failed or been abolished after a longer or shorter trial. Among others may be mentioned the correctional colony at Merxplas Ryckevorsel, in the Campine of Antwerp; the agricultural colony of Ostwald, near Strasbourg, which has recently been converted into a penitentiary colony for young prisoners; and the colony of Linth, in the canton of Glaris, which, formed at first for adults, has long received only children. It is believed, indeed, that there are no correctional colonies for adults now in existence, except only those of Ommerschaus and Veenhuizen, in Over-Yssel and La Drenth, in Holland; and, in some respects, the depôt of mendicity at Hoogstraeten, in the province of Antwerp, in Belgium.

3rd. *Agricultural Reform Schools, Refuges, and Colonies for Young Paupers, Mendicants, Vagabonds, Orphans, and Foundlings, Deserted Children, and those who are Vicious or in Moral Danger (Moral Orphans).*—The number of such establishments is considerable, and increasing every year in Germany, Switzerland, Holland, France, and Belgium; while in England, likewise, they are struggling into existence.

4th. *Agricultural Penitentiaries, or Penitentiary Colonies.*—These establishments, directed exclusively to the training of children and young persons found guilty, or acquitted only as having acted without knowledge (discernement), but detained for the purpose of being brought up to a stated age, are numerous, and still increasing in several countries: such, especially, are the Penitentiary at Parkhurst and the Philanthropic Society's Agricultural Colony at Reigate; in France, the farm-colonies dependent on houses of detention, such as those of Gaillon, Fontevrault, Loos, &c., and the reformatory colonies of Mettray, Petit-Bourg, Ostwald, &c.; in Switzerland, the reformatory school of Bächtelen, in the canton of Berne; in Holland, the colony on the model of that at Mettray, which is being instituted by M. Suringer, &c.

All those out-door institutions which contemplate the management of adults have proved decided failures, excepting only the "fermes-hospices" of Flanders, which, exemplifying the economical elements with which all home-colonies and philanthropic efforts have to deal, deserve a brief notice, preparatory to a study of that application of the home-colony to purposes of educational and reformatory discipline for children and young persons, which I am more especially desirous to bring before your notice.

Fermes-Hospices of Flanders.

The "Fermes-Hospices" of Flanders are of very recent origin, and have chiefly originated in efforts of private beneficence to deliver the class which inhabits them, by gifts of land and buildings to the several

"bureaux de bienfaisance," from the barbarous system pursued in some of the communes, and which is not yet extinct, under which the aged, infirm, and orphans dependent on public largess, are hired out to individuals; and to obtain the most favourable terms possible for the commune, the price of their maintenance is fixed by a public auction of each of these poor creatures. "These auctions," states M. Van Damme, Commissaire of the arrondissement of Roulers-Thielt, in a general report to the Provincial Council of West Flanders, in 1846, "are conducted in much the same manner as the sale of any piece of furniture or beast of burthen. Those who have a fancy for the thing, called together by the ordinary modes of public advertisement, attend in considerable numbers to aid in the proceedings. The poor creatures who are to be put out undergo a sort of public exhibition. Every one is allowed to calculate the disadvantages which infirmity would entail, and the profits to be derived from the remaining strength of each object submitted. Often they are knocked down to the highest bidder amidst the most revolting remarks, and the bargain becomes the subject of mutual jokes or lewd congratulations, according as it is deemed advantageous or otherwise for the parties. The paupers thus placed out are, for the most part, exposed to severer treatment than the greatest criminals in the worst organized prisons." "The orphan child," says a country pastor, appealing to the Belgian Home Office against this practice, "after being examined like a horse or a Negro slave, is put up, and the rate at which the bargain is struck is commonly determined by an estimate of the vigour of its health, and the services that can be got from it as an instrument of mendicity."

This barbarous mode of "assistance" was excused, or at all events explained, by the destitution of means on the part of the several communes; but there was only one way of putting an end to it, which was to prove by the most indisputable facts that it would not cost more really to give comfort to the aged and the orphan, than thus to press them to destruction; and this proof has been afforded by the fermes-hospices.

In East Flanders, the fermes-hospices have chiefly originated in private charity, but under various forms; while in some communes they have been exclusively the work of individuals, who have erected the buildings at their own cost. In others it is the bureaux de bienfaisance that have formed these places, with the aid of subscriptions and special gifts; while in others, again, property of the bureau de bienfaisance has been sold to provide the requisite funds. But everywhere, before commencing the work, a fruitful canvas has been made among the wealthier inhabitants, and the peasantry have taxed themselves in the leading of materials, &c. Usually, the commencement has been on a very small scale. At first, some few paupers have been assembled in a house belonging to the bureau de bienfaisance; these have been employed in public work for the commune; then a field has been taken for them to plant potatoes in it, and presently this first commencement of cultivation, by their agency, has been extended. Each establishment is managed by an administrative commission, named by the communal council, and each forms a kind of farm, the labour of which is performed by the aged and the orphans, who raise

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produce enough to supply themselves with food. The domestic work is performed by the women, and the clothing is chiefly made in the house. In fine, each hospice is a little agricultural colony of the aged and infirm, and of orphan children, helping each other according to the measure of their capacities, under the direction of superintendents, or, more commonly, of some *sœurs de charité*. The extent of land attached to each is very small; the greatest in West Flanders is 12½ acres. In almost every establishment, however, two or three cows are kept; and the inmates. paying neither rent nor taxes, cost the communes very little indeed, the greater part of the inmates being yet able to work somewhat. They use the spade or the hoe, spread the manure, get in the seed, and pull up the weeds; they sew, wind bobbins, and weave linen; their food consists of milk, potatoes, vegetables, rye-bread, and lard—all the produce of their own husbandry. Their clothing is of coarse stuffs, woven and made at home. And to these resources are even added the profits earned by the schools and teaching shops conducted by the sœurs, gifts from the charitable, &c.

On the 1st of January, 1851, there were in the arrondissement of Roulers Thielt (West Flanders), according to a return furnished by its Commissaire, M. Van den Berghe, the following fourteen fermes-hospices, the establishment and cost of which were as follows:—

Description.	Number of Indigent Persons usually Maintained.	Persons composing the Direction.		Cost of Daily Maintenance.
		Religious.	Lay.	Centimes.
Ardoye	35	5	2	25
Gits	42	3	4	40
Hooglede	70	4	....	20
Ingelmunster	64	....	3	12
Ledeghem	36	....	2	32
Lichtervelde	92	8	....	12
Mulebeke	102	20	....	16
Moorslede	160	10	....	20
Oostnieuwkerke	54	....	2	14
Ouckene	35	....	2	20
Pitthem	96	7	2	17
Ruysselede	60	7	....	20
Rumbeke	82	4	....	11
Staden	75	3	1	11
Wacken	19	....	2	25
Westroosbeke	30	....	2	18
Total	1,052	71	22	Avg. 20

I have entered the more fully into this description of the origin and present state of the fermes-hospices of Flanders, because it supplies a graphic description of the moral and economical basis upon which all analogous institutions have to be founded, at least in countries where there is no elaborate system of legal relief for the poor, as in our own, and which, in fact, underlies all such superstructures even in more indulgent England. The old Flemish condition of the pauper had its exact parallel in Switzerland; and the orphan poor who survived the hard slavery of their childhood, grew up in ignorance and

destitution, to be the authors, in their turn, of families destined to perpetuate the like degradation.

Farm Schools of Switzerland, and their Employment in Reformatory Discipline.

Jean Henri Pestalozzi, born at Zurich in 1746, was the first to recognise the impropriety and danger of such gross neglect; he sacrificed all his limited means in founding a rural school for pauper children at Neuhof; and he pursued to the end of his life, through misapprehension and through scorn, the work of humanity which he had undertaken. This was recommenced on a striking scale, in 1799, by M. Phillippe Emmanuel de Fellenberg, at Hofwyl, whose views and institutions embraced the education of the highest, as well as the most destitute, members of society, and whose most valuable agent in the management of his poor-school, Werhli, still perpetuates the spirit and realizes the views of Pestalozzi, at the normal school of Kreutzlingen, near Constance. The poor-school at Hofwyl is no longer maintained; but it must not be supposed, therefore, that its influence has been lost.

The number of rural schools erected on the plans of Wehrli have rapidly increased, and there are now one or more in almost every canton. These have not exactly the same object, but admit of being divided into the two classes which we have already adopted. 1. Correctional and reformatory schools for delinquent and vicious children; and, 2. Asylums and homes for pauper, orphan, deserted, and morally-endangered children, who are destitute of the education supplied by the common relationships of a family.

The habits of domestic life form the basis upon which these establishments are founded. The superintendence of each of them is ordinarily committed to a married teacher; he fills the office and bears the title of the father of the family (hausvater); his wife assists him in all that appertains to the housekeeping and the supervision and industrial instruction of the girls; she bears the title of "hausmutter." Organised upon the domestic plan, the greater number of these schools receive children of both sexes.

This union of girls and boys under the same roof is somewhat contrary to received usages, and one might dread its giving rise to some inconveniences. But experience has proved, and proves every day, that these inconveniences are more apparent than real. It is observed, on the contrary, that the imaginations of children are more excited when the sexes are separate than when united, and fraternal and daily relations have been established between them. In a village, the habitual contact of girls and boys, under the general surveillance of the parents, forms the rule, and it has never occurred to the mind of any person to prohibit or even seek to restrain it. The rural school, destined to represent, in a minor degree, domestic life and village routine, can and ought to admit of the like toleration, provided that the necessary precautions are taken that the intercourse shall not degenerate into abuse. Amongst these precautions, may be mentioned—

1. The vigilant supervision of the mother and father of the family.

2. The admission only of children under 12 years of age, and their dismissal at 17.

3. The separation of the dormitories appropriated to children of each sex.

Subject to these precautions, which even common sense dictates, the union of children of both sexes in the same establishments presents numerous advantages, viz. :—

1. In respect of economy of management.

2. In respect of a judicious distribution of labour, as best suited to the capacities of either sex.

3. In respect of instruction and education, by softening the dispositions, creating emulation, and strengthening the fraternal ties which should unite the members of one family.

But that a genuine domestic spirit may prevail in the establishment, the number of inmates should be limited, in order that the adopted parents may have daily, and, to a certain extent, continuous intercourse with the children entrusted to their care, and that the work of individual education may progress equally with that of collective education.

In the Swiss rural schools, the number of pupils usually varies from twenty-four to forty; in some establishments, as at Bächtelen, on a plan similar to that of the Rauhen-haus, at Hamburgh, the entire family is sub-divided into lesser ones, of twelve or more children, who are placed under the superintendence of an assistant "father." The children generally are usually admitted between 6 and 12, and quit, as already stated, at 17 or 18 years of age, after confirmation.

The plan of instruction is that adopted at common elementary schools. Agriculture forms the basis of their industry, and various other occupations are usually introduced, to economise the expenditure of the establishment, and to employ the children when they are prevented from out-door work, or when such is not required.

The conditions of admission vary with the nature of the establishments, poverty not being generally held as a sufficient qualification; the want of education and parental care are necessary. Formed by free societies, these schools are principally supported by voluntary contributions; to complete their resources, a small annuity is paid by the communes or by benefactors, in order that a child destitute of all support may be admitted gratuitously.

The supervision of each establishment is entrusted to a committee, who also direct the placing out of the pupils on their departure, and take a benevolent interest in them.

A system of normal schools, especially designed to furnish teachers for pauper children, is an essential part of this system of rural schools for their training. Some of these establishments are attached to the rural schools, as at Hofwyl, Trogen, Carra, and Beuggen; elsewhere, as at Kreutzlingen, they exist separately. The "Société Suisse d'Utilité Publique" has fully conceived the importance of training fit persons for the rural schools; it has set aside a certain sum of money to allow of a proportionate number of candidates being placed in the normal schools, where they learn the theory and practice of teaching, initiate themselves in the habits and occupations of a country life, and prepare themselves for fulfilling the humble duties of a laborious profession, in a pure spirit of self-denial and devotion, for which the world offers no recompense, and which can hope for its reward only in heaven.

Cost of Maintenance in the Rural Schools of Switzerland.

Name of Establishment.	Expenditure per Head per Annum.
	Francs.
Establishment for Orphans at Trogen (Canton d'Appenzell Rh. ex.)	150
Ditto at Schonenbühl (ditto)	148
Pauper and National School at Beuggen (Canton de Bäle)	150
Ditto at Battwyl (Canton de Berne)	300
Ditto at Langnau (ditto)	210
Ditto at Trachselwald (ditto)	120
Ditto at Grute (ditto)	198 to 212
Reformatory School at Bächtelen (ditto)	247 to 250
Ditto at St. Gall (Canton of St. Gall)	180 to 225
Rural School at Carra (Canton of Genève)	255
Colony at Linth (Canton of Glaris)	135
Reformatory School at Buch (Canton at Schaffhouse)	132
Ditto at Freienstein (Canton of Zurich)	105

The mean cost of maintenance in these thirteen establishments is 185 francs per head per annum, or 50 centimes per day*.

A more detailed instance or two of the mode in which these institutions have been formed, will show the sources from which we must expect analogous movements at home, and yield us the important injunction, never to clog the springs of voluntary charity or of missionary effort among the people, but, by the hand of authority, merely to render aid and assistance wherever it is obviously wanted. It will hereafter be seen, that even all the despotic governments of Europe have already learned this maxim, or there would have been little material for the present paper. In Switzerland, and, in fact, throughout Europe, the agricultural poor-schools and reformatory schools all have the like origin and support, for the most part in private charity and effort, more or less seconded by the public authorities. The influences of religion are esteemed an essential condition of their useful existence; and their management is in the hands of local committees, of a more or less public character, according to the degree in which private or public sacrifices take part in their formation and support.

The institution of the agricultural poor-schools had proved a great benefit to Switzerland, by powerfully contributing to relieve distress and to stop the progress of pauperism. But experience showed that these establishments alone did not suffice to meet the case of vicious and offending children. When intermingled with others in the poor-schools, they are the means of introducing into them the germs of a demoralization which the vigilance of their managers cannot always counteract. Hence arose the necessity for drawing a line of demarcation between them, and of forming special establishments for the vicious and offending class. One of the first promoters of this reform,

* Considerable use appears to have been made by M. Ducpetiaux, in his account of the Swiss schools, of a work published, in 1845, by M. J. C. Zellweger, Director of the Pauper School at Schurtanne, near Trogen, entitled "On the Pauper Schools of Switzerland, erected on the Principles of Fellenberg."—(Die Schweizerischen Armenschulen nach Fellenberg'schen Grundsatzen. *Trogen*, 1845.)

Jean-Gaspard Zellweger, of Trogen, submitted a plan on this subject to the general assembly of the Swiss "Society of Public Usefulness." This plan was approved, and to hasten its execution, one of the old pupils of Werhli, Mr. Kuratli, was commissioned to visit the foreign establishments which might serve as a model for the projected institution. He spent two years in Germany, and after visiting the establishment of Kopf, near Berlin, gave his special care to a study of the organization and methods of the institution for morally neglected children of the Rauhen-Haus, at Horn, near Hamburg. On his return to Switzerland, in 1840, he was intrusted with the management of the reform-school, which it had been determined, three years before, in 1837, to call into existence.

This school is situated at Bächtelen, half a league from Berne, and holds, in some degree, a middle position between a poor-school, properly so called, and a house of correction. The most scrupulous care was used in the admission of the children, who were received separately, and at intervals more or less remote, so that, at the close of 1841, the number was only twelve, forming one family, under the special direction of Mr. Kuratli. The formation of a second family was commenced in 1842, and completed in 1844, under the management of a second teacher, Mr. Engeli, who had also served his apprenticeship under Werhli. Finally, in 1845, a third family was formed, also composed, like the two others, of twelve children. In addition to these three families, there has also been formed a trial section of six or eight children, in which those newly arriving are placed, before receiving their definitive place in the families, as vacancies occur in them. This organization in families, planned on that instituted at the Rauhen-Haus, by M. Wichern, has completely answered its end to the present time; facilitating surveillance, fostering emulation, and permitting the application to each child of the sort of care and management best adapted to its character and disposition.

Heretofore, this school has received only boys of the Protestant communion, but it is intended by its founders to form a similar establishment for children professing the Roman Catholic faith, as well as one for girls. The children are received from 6 to 15 years of age, with the view of their being kept for at least four years. There is a local committee for the superintendence of details, acting under a general committee of the Society, composed of six members belonging to different cantons, the inmates being received from any part of Switzerland. Besides the director, there is an assistant teacher, or "père," at the head of each family, a manager of the cultivation and stock, and a female housekeeper, making altogether a large staff for the management of forty boys. Besides food, lodging, and every necessary but clothing, the director receives 800 francs, and each of the subordinate officers 300 francs per annum each, in Swiss currency, which is worth 50 per cent. more than French.

The children are employed in field-labour and gardening during the greater part of the year; but there are likewise workshops for rope-making, cooperage, and joiner's work. The instruction is similar to that of the primary schools of the canton, occupying two or three hours daily in summer, and four or five in winter. The religious instruction is confided to the pastor of the commune, who gives the

most assiduous attention to it. As for the work of education, it is being carried on at every moment; and, in unceasing contact with one or other of the persons in whose charge they are placed, the children cannot escape the good influences which surround them on every side. Their general conduct leaves nothing to be desired, and their abilities strengthen with their moral progress. Although the departures have yet been few, the success which has attended the young people augurs well for the future. A committee of patronage has been formed with a view to procure proper places for the young people going out, and to exercise a kind influence for their welfare. To extend the benefits of this establishment, a special institute has recently been formed at Bächtelen, to train masters and assistants for similar institutions, the students in which are to remain for three years; but, before their definitive admission, they are subjected to a three-months' trial.

The maintenance of the reformatory school at Bächtelen is chiefly due, like its origin, to the indefatigable charity of the Swiss cantons. It is sustained by private subscriptions and donations, to which additions are made by the several cantonal governments; as also by the produce of its cultivation and workshops, and the price paid for the reception of children by particular communes, patrons, or parents, which average 50 francs (Swiss) per annum. The extent of its cultivation is 40 jucharten of fertile land, conveniently situated; and the value of the whole property, with that of the buildings and stock, is 54,944 francs (Swiss). The mean annual cost per child per annum has been of late years 165 francs (Swiss), or 247 f. 50 c. (French), or a little under 10*l.* English; giving a daily average of 68 c., or nearly 7*d.* English. This may be regarded as the extreme necessary cost, on the Continent, of an institution in which the amplest moral agency is provided, for purposes not of education merely, but of reformation also; and though one "père" to every twelve children appears to be a large proportion, yet it should be borne in mind that even in the common poor-schools it is strongly urged by Wehrli that the number thrown together in one community should never exceed thirty.

In 1833, a great number of more benevolent citizens formed an association for the advancement and extension of the "Christian Education of the People in the Canton of Berne." This central society for the canton has its subdivisions for the several districts and chief communes, and its affairs are managed by a principal committee, corresponding with assistant committees. The objects are—1. The establishment of schools of protection and work-schools for young girls; 2. The supply of soup to the poorest children in the common schools; 3. The apprenticeship of poor children; 4. The maintenance and encouragement of teachers for them, by the establishment of libraries for their use, courses of lessons, mutual conferences, &c.; and 5. The establishment of schools for pauper and morally-endangered children. In accordance with this last portion of their plan, the society has formed successively three schools—two for boys at Bättwyl and Langnau, and one for girls near to Bremgarten, each managed by a special committee, that for the girls consisting of nine ladies. Among

the other Swiss farm-schools deserving of more especial notice are also the orphan house of Trogen, at Schurtanne, canton of Appenzell, founded in 1844 by Jean Gaspard Zellweger, of Trogen; the free school of Beuggen, for pauper children and the training of teachers for rural schools, originated in 1817 by a voluntary society formed at Bâle, who have been allowed to use for its accommodation the Château of Beuggen, about three leagues from the town, rented to them for this purpose by the Grand Duke of Baden; the rural school of Carra, in the canton of Geneva, erected in 1820, on the plan of Hofwyl, by the joint efforts of some benevolent individuals, led by M. Ch. Putel de Rochemont; the poor school of Eschersheim, in the canton of Glaris, known also as the colony of Linth, from being founded on the marsh of that name, by a charitable association led by the counsels of M. de Fellenberg; and the normal school of Wehrli, for teachers of rural schools, at Kreutzlingen, in the canton of Thurgovia. M. Ducpetiaux, in reporting to his government, gives special notices also of the orphan houses of Schönenbühl, near Teufen, and Vögelinseek, at Speicher, in the canton of Appenzell; that of St. Marguerite, in the canton of Bâle; the poor-schools of Trachselwald, Biel, Grube, Wangen, Rüggisberg, Könitz, Grossaffoltern, Langdorf, and Neustadt, in the canton of Berne; the reform-school of St. Gall; the poor-schools of Foral and Pfankis, near to Coire; the reform-school of Schiers, and the orphan-house of Coire, in the canton of the Grisons; the reform-school for pauper and neglected children at Buch, in the canton of Schaffhouse; the orphan-house of Soleure; the rural school for pauper children at Bernrain, in the canton of Thurgovia; the agricultural schools of Echlehens and Champe-de-Bois, in the canton of Vaud; and the reform-school of Freienstein, and the poor-school of Kappel, in the canton of Zurich.

Farm Schools for Preventive and Reformatory Discipline in Germany and the Northern States of Europe.

Germany, like Switzerland, has not rested satisfied with scattering the children dependent on its charity out at board to the cheapest bidder, in whose charge they obtain no education whatever, but, on the contrary, are too often the victims of vicious speculation. It has made endeavours to bring together its "moral orphans" under able and devoted management, deeply solicitous for their best interests, and having a special regard to their future prospects. The reform-schools of Wurtemberg, for instance, date from 1820. In 1828, there were already 8 such schools, containing 259 children; and in 1841 they amounted to 20, and afforded shelter to 1,063 children. Yet further, in the kingdom of Wurtemberg, as in many other countries in Germany, scholastic education is generally combined with industrial and agricultural training. In 1841, this twofold instruction was extended to 51,505 children, dispersed through 882 schools. The agricultural schools, properly speaking, numbered 11,735 pupils.

The Grand Duchy of Baden was not slow to follow the example of the kingdom of Wurtemburg, but with restriction to a more limited class of children. In 1833 an association was formed, and subscriptions collected; the institution received the approval and coun-

tenance of the government; and it has embraced the whole of the Grand Duchy. Its aim is the reformation of children on the road to vice; those whom their parents or teachers have vainly endeavoured to correct; those whom their families might corrupt; and even those under judicial condemnation. It adopts the two methods concurrently of combined education in special establishments, and placing the children out with individuals. Amongst the establishments of this kind in Baden, we may notice the house of reform at Durlach, erected in 1837; the reformatory schools at Lichtenthal, near Baden-Baden, for Protestant and Catholic children; at Mariahof, founded in 1843; at Haardthaus, near Carlsruhe; at Bögisheim, near Müllheim; at Weinheim, &c.,—the last establishments recently erected.

In Bavaria, the house of reform at Nuremberg numbers many ladies in the society who founded and support it; and it receives assistance also from the treasury of the district. Gratuitous admission is only granted to children under the twofold condition of destitution and want of moral protection. It does not receive those that could find shelter in other benevolent establishments, or whose family seek to get rid of them from selfish motives. The age of admission is from 5 to 13, and the cost of board is 60 florins per annum. Other establishments of the same kind have been established successively at Schallershof, near Erlangen, for young indigent females; at Bayreuth, by the Association of Jean-Paul; at Hof, Naila, Trautberg near Rüdenhausen, Hassloch in the Palatinate, &c.

In the grand-duchy of Hesse Darmstadt, there is one reformatory school at Arnsburg.

In the grand-duchy of Saxe Weimar, the reformatory school which Falk erected in 1813, and sustained by his sole efforts, would have sunk at his death, if the Grand Duke had not converted it into a public establishment, and annexed it as an appendage to the Institute for Orphans (but with a separate and distinct object, that of an asylum for neglected children), and at the same time preserved the name of the generous founder, as a just testimony of public gratitude to his memory.

The principality of Lippe possesses one reformatory school at Ehrsen; and in the kingdom of Hanover, M. Geyer erected a small reformatory school at Volpritshausen, in 1840; and a like one was founded at Alten-Cellen, near Celle, under the title of the Linerhaus. The electorate of Hesse, likewise, possesses a reformatory school at Rengshauser, erected by M. Rausch, its pastor.

In the kingdom of Saxony, the Agricultural Institute of Braunsdorf, near Freyberg, originally intended for orphans, has been appropriated, for some years, with the concurrence of the Government, to serve as an asylum for morally-endangered children; and another establishment, having the same end, has been erected at Dresden, by means of private subscriptions. But the most remarkable reformatory school of the north of Germany, is that of the Rauhen-Haus, at Horn, near Hamburg, under the direction of M. Wichern, founded in 1833. This establishment may be considered to have served as a pattern for most of the establishments of this kind erected since that date.

Lubeck followed the example of Hamburg in 1844; its reformatory school bears the name of "Fischerbuden." Bremen has recently possessed a reformatory school at Ellener-Hof. Mecklenburg has erected a reformatory school at Ghelsdorf, near Rostock; and Schleswig-Holstein has its own at Flensburg, under the denomination of "Martinstift."

Next to Wurtemberg, Prussia is the most zealously occupied in providing the means of rendering assistance to neglected, abandoned, or vicious children. In 1825, a house of refuge was founded in one of the suburbs of Berlin, with divisions, one for girls and the other for boys; and the direction of the latter has been confided, since its origin, to M. Kopf. A private association has recently erected a reformatory school at a place in the environs of Berlin, under the name of the Pestalozzi Foundation (Pestalozzi-Stiftung). It occupies a space of ten acres, and already has a family of ten children; this number will be gradually increased to twenty-five or thirty, subject to the direction of the "father of the family." Königsberg, in old Prussia, has also its house of refuge.

Pomerania possesses a like establishment at Züllchow, near Stettin, which is annexed to the Institute of Brothers; and an association of ladies founded an asylum on a smaller scale for young girls at Garz, in 1844. Many other asylums of the same kind have been successively established at Abtshagen, at Parchlin near Bärwalde, at Cardemin near Greiffenberg, at Greiffenberg, Plathe, Cammin, Wangerin, Zanow Stralsund, Eckartsberga, &c.

At Posen and Rawicz, in the Grand Duchy of Posen, there are some small asylums, formed in 1830. The Association of Meseritz, for the education of pauper and morally-endangered children, has recently erected a reformatory school at Rokitten. There are, moreover, for the three provinces of this duchy, special departments for deserted children in the workhouses of Berlin, Straussberg, Landsberg-sur-la-Warte, Neckermünde, Tapiau, and Kosten. A house of correction and reform for young delinquents has also been recently formed at Insterburg, in Eastern Prussia.

In Silesia, different associations for the benefit of abandoned and morally-endangered children have been instituted at Goldberg, in 1829; Lüben, 1833; Jauer, in 1834; Görlitz, in 1835; Schreiberhau and Leignitz, in 1836; Strehlen, in 1837. Four, those of Goldberg, Görlitz, Reichenbach and Leignitz, and Schreiberhau, have erected houses of refuge, into which children of both sexes are received. At the house of refuge at Schreiberhau, which has recently extended its operations, an institute of brothers is about to be annexed, on the plan of that at the Rauhen-Haus. There is likewise a reformatory school at Neusatz, near Breslau.

In the duchy of Saxe, the old house of refuge at Aschersleben has ceased to exist. The Institute at Erfurt (Martinstift) cannot properly be counted amongst the asylums now under consideration. The department for children in the workhouse at Zeitz may, in some respects, be classed with them. More recently, three reformatory schools have been instituted in this province; at Althaldensleben, near Magdebourg; at Kläden, near Stendal; and at Neintsted, near Quedlinburg;

and attached to the latter is an institute of brothers, similar to that under the direction of M. Wichern, at the Rauhen-haus.

In the province of Westphalia, also, there is an especial department for children of both sexes in the workhouse of Benninghausen, and a small reformatory school founded lately at Borgholzhausen.

In the province of the Rhine, the establishment at Düsselthal, erected by Count Von der Reeke, under the superintendence of the Government, and the ancient Abbey of Steinfeld, in Eifel, dependant on the workhouse of Brauweiler, afford an asylum to unfortunate young persons temporarily excluded from society through misery, neglect, or vice. To these may be added the houses of refuge and reform at Herstein, Simmern, Kreuznach, and Unterbarmen, and the Association for the Education of Pauper Children at Neukirchen, near Mörs.

Lastly, Prussia numbers many establishments of the same kind at Naumburg, Querfurt, Schilesche, Herrestadt, Greiz, Wartenburg in Ermland, Zimmerhausen, Reitwein, Zühlsdorf near Arnswald, Linde, Brüssow, Gramzow, Gefell, Bernburg, &c.

The greater part of these institutions are formed by societies or individuals on a very humble basis, and only number a few children; some receive children of both sexes, and others only girls or boys. The organization in families generally prevails, as at the Rauhen-haus, which has furnished many schools with their teachers. Usually the boys are employed in agricultural pursuits and gardening, or other occupations likely to afford them the means of subsistence at their departure.

This movement has extended into the North of Europe. In Sweden, Baron Gyllenkrok, encouraged by the success exhibited in the Institute of Hamburg, founded some years since a reformatory agricultural school on one of his estates. In aid of this first attempt, and to facilitate the formation of two new establishments of the same kind, the Diet voted to the Government a sum of 40,000 thalers. Christiania, likewise, possesses a house of refuge for boys in one of its suburbs, to which the Norwegian Diet has recently made a grant.

In Denmark, the late Count Holstein founded, on one of his estates at Finxendal, in the island of Seeland, in 1834, an agricultural asylum for morally-endangered children; and a second house of refuge has been recently erected at Copenhagen by the Benevolent Society for Deserted Children.

In the Russian provinces bordering on the Baltic, reformatory schools have been successively formed at Arnsburg, in the island of Œsel, at Pernau, and at Reval. Numerous colonies formed by the Germans, particularly in Bessarabia, cannot be classed amongst the establishments which form the subject of this notice. It may be mentioned, however, that there exists a species of house of refuge at Sarrata, organized after the model of the reformatory schools of Wurtemberg, and which affords an asylum for vicious or neglected children, appertaining to the German colonies of that district.

Austria, likewise, possesses houses of refuge for vicious and morally-endangered children at Vienna, Brünn, and Prague. And,

lastly, a reformatory agricultural school has been recently formed at Zclemér, near Debreczin, in Hungary.

The following enumeration of the various kinds of industry pursued in the reformatory schools of Germany, may be suggestive to the managers of those which are coming into existence in England. They embrace the culture and pruning of fruit trees, horticulture, the construction of little articles in wood, such as boxes, spoons, forks, dinner-knives, cages, mouse-traps, ladders, vices, &c.; models of instruments in iron and wood, toys, games, articles called "d'Offenbach," brushes for scouring and painting, and pencils; baskets, panniers of rushes and of willow, mats, straw bonnets, hats, fig-baskets, beehives, table-mats, preparations of hogs' bristles and rabbits' fur, the preparation and spinning of wool, cotton, flax, and hemp; the manufacture of lamp-wicks, list shoes, socks of cow and goat skin; the knitting of socks and under-stockings, gloves, ruffles, bonnets, vests, braces, garters, drawers, purses, &c.; lace, braid, stay-laces, bone-laces, festoons; stitching, embroidery, marking, tapestry, &c.; drawing, colouring, brocade; manufacture of envelopes, paper bags, pasteboard, and watch cases; artificial flowers, little bricks of bark to burn; tin buttons; picking wool, horsehair and tow; rags; manufacture of weavers' spoles, hempen twine, horsehair, girths, shirt buttons, reticules, and game bags; foot mats, pearl ornaments, and crochet; fringe, braiding; bridles, and other articles in leather, &c. This enumeration is sufficient to show how much may be, and is, in fact, accomplished by a right direction of the abilities of these children.

It is not an exhaustive account of these institutions, scattered over the whole of Germany, that I have now to offer, but only the statistics of those characteristic institutions which present some marked step onward. Such are the reformatory schools of Wurtemberg, advanced to a state system, and the Rauhen-Haus, at Horn, near Hamburg, which has the largest, and perhaps also the best, normal school for institutions of the kind yet existing in Europe.

Reform Schools of Wurtemberg.

The number of inmates, divided by the number of establishments in the following table, shows an average of 56 children in each, of whom 33 are boys and 23 girls. This average is exceeded in ten schools, "and, in my opinion," says M. Ducpetiaux, "considering the régime and constitution of reformatory schools, unwisely exceeded." If the domestic character and feeling is to be maintained, it is evident that one "father" and one "mother" cannot direct and supervise so large a number of children. No remedy presents itself for this inconsistency but a reduction of the inmates and an increase in the number of schools, or a subdivision of the families, as in the establishments at Wilhelmsdorf and Lichtenstern, or the formation of separate families for girls and boys.

*Reform Schools of Wurtemburg, in the order of their erection, with the Number of Children in each on the 31st December, 1844.**

Name of Establishment.	Date of its Formation.	Number of Children.		
		Boys.	Girls.	Total.
1. Stuttgart	1820	38	17	55
2. Winnenden	1823	41	29	70
3. Kornthal	1823			
4. Schlolweise	1829	102	76	178
5. Wilhelmsdorf	1830-37			
6. Tuttlingen	1825	37	20	57
7. Kirchheim	1826	26	19	45
8. Stammheim	1826	32	27	59
9. Ellwangen	1831	57	37	94
10. Ludingsburg	1825-35	34	34	68
11. Lichstenstern	1836	45	45	90
12. Reutlingen	1838	38	23	61
13. Göppingen	1839	32	19	51
14. Lustnau	1840	26	14	40
15. Ebingen	1840	29	10	39
16. Herbrechtingen	1841	20	14	34
17. Plieningen	1841	46	25	71
18. Hall	1841	19	7	26
19. Tempelhof	1843	11	12	23
Total		633	428	1,061

In Wurtemberg, the pauper and neglected children, recipients of the aid afforded by the reformatory schools, form but a minority of those to whom public benevolence is extended, the number being estimated at 4,411, distributed in the following manner :—

1. Orphans and abandoned children in urban establishments	850
2. Orphans and deserted children boarded out	2,500
3. Orphans and deserted children in the Reformatory Schools	1,061
	4,411

This summary does not comprise the children admitted into the five establishments for deaf and dumb, the two for blind, the two for invalid children, or that appropriated to idiots and children of weak intellect. From calculations founded upon known facts and scrupulous observations, it is concluded that there are in Wurtemberg 18,000 children who may be classed as devoid of education and family care. It results, therefore, from the preceding summary, that, in spite of the efforts already made in their behalf, more than three-fourths of these children are still left in a state of neglect, fraught with danger.

From the commencement of the reformatory schools to the end of 1844, admission was given successively to 2,684 children (1,668 boys

* Since the date of this return many establishments of the same kind have been formed, amongst which may be noticed those of Gundelshein (œuvre de St. Nicholas), of Baindt, near Ranesburg, and of Wizingen, near Gmünd; all three appropriated to children professing the Roman Catholic religion.

and 1,016 girls), and of this number 137 were foreigners. The average annual admissions during this period were 263, rather less than 14 to each establishment; and, for the same period, the departures amounted to 1,594, of which number 1,020 were boys and 574 girls, of whom 92 have died, 1,291 have been placed in service or apprenticed, and 211 admitted into other establishments, returned to their families, or quitted the country. The proportion of deaths to admissions in 24 years has been 1 in 29·17, or about $3\frac{1}{2}$ per cent.

Religious and Moral Education of the Children in the Wurtemberg Schools.—The aim of education in reformatory schools, is to correct vicious habits, and (D.V.) to form honest men, good christians, and useful members of society. Its essential purpose is to maintain the children in the humble sphere in which they were born, to point out to them the necessity of imbibing a taste for industry, and to prepare them for the performance of the humble duties, and for employment in the subordinate occupations, which their birth and social position impose upon them. Its foundations, too, must be laid in religion, without which there is no real education.

Religious instruction and exercises consequently occupy a prominent place in the régime of the reformatory schools of Wurtemberg. Morning and evening, the practice of family worship (Hausgottesdienst), usual in Protestant countries, is observed. This comprehends the singing of psalms or hymns, prayer, and the reading of passages of the bible, followed by an explanation or conference. Before and after meals, a short prayer is offered, for which a lecture on a passage from the bible is sometimes substituted. Independently of these exercises, the children participate in religious teaching (kinderlehren), and assist on Sundays and feast-days at the service in the church of the commune, unless the chief of the establishment, as at Lichtenstern, be invested with the necessary qualifications for celebrating divine service, which, in this case, has a special locality set apart for it in the school. At the close of divine service, half-an-hour is devoted to catechising the children on what they have heard at church; the older ones making an abstract in writing of the sermon of the day. In the evening, the whole establishment takes part in a religious conference, or at the reading of extracts from the history of the church, the missions, &c.

Moral, intellectual, and industrial education, move hand in hand with the religious education; it is directed in the same simple and lowly spirit. Every opportunity is seized of inculcating in the children habits of order, propriety, and activity, and inspiring them with sentiments of obedience, humility, truthfulness, and honour. Subject to a vigilant and continuous supervision, account is taken of their good or bad dispositions, of their progress, and of their faults. Children whom some circumstances have brought more particularly under the notice of the head of the family, are the objects of an especial supervision. In some establishments, those who exhibit at their admission a tendency to vice, are confided to children distinguished by their good conduct, who serve them as guides and tutors, till, by their counsels and example, they bring them back to the right path, and form them to the discipline of the school.

Many children, even of tender years, bear, on their arrival, the stigma of hereditary degradation; many have contracted shameful and

secret habits, which it is necessary to eradicate at any sacrifice. In such a case, religion comes powerfully in aid of advice, and the vigilant supervision of the overseers. The head of a family takes a child particularly suspected, and elicits an entire confession, which is usually followed by a promise of amendment; from that time his attention is awakened, and no means are spared to effect a sincere and lasting reformation. Decency is to the mind what propriety is to the body. Everything that might bring injury to the former is sedulously avoided, and, at the same time, a scrupulous watch is kept over the latter. Although children of both sexes be united under the same roof, every necessary precaution is taken that neither impropriety nor danger shall result from this proximity. The girls and boys only meet at meals, in school, and at religious exercises; at other times, during work, in play-time, and, above all, in the dormitories, they are entirely separate. Each child has its own bed. In each sleeping apartment, there is a male or female overseer, who never leaves for an instant, and exercises an especial control over those children whom some peculiar circumstance points out to their attention. Through these precautions, the union of boys and girls in the same family is rendered productive of many advantages, and leaves no room for abuse. All the heads of establishments agree on this point, that a too entire separation of the sexes is more prejudicial than useful.

Another source of embarrassment and difficulty consists in the relation of the children with their parents and friends. These relations should be watched with the greatest care; if they sometimes exercise a healthy influence, they have too often fatal consequences. But, as an alternative, and to avoid the breaking up or weakening of family ties, the visits of parents to children, and *vice versâ*, are generally authorized once a week, on Sunday.

On the other hand, the classification in families effected by these institutions themselves, possesses numerous advantages; it facilitates the study of character and the peculiar treatment, so to speak, of each moral peculiarity; it lightens the weight of surveillance and renders it more efficacious; it binds the members of the family tighter together by fraternal ties; it permits the separation of those who mutually annoy, and the reunion of those who are agreeable to each other; it stimulates emulation; and it opens the door of reformatory schools to certain unfortunates, who, smitten by the hand of justice, are daily excluded from establishments otherwise organized, where, in the absence of classification, the entire population would be exposed to their dangerous contact. But the classification to which we are referring presupposes the existence of a subordinate staff, 1st, perfectly capable, and 2ndly, entailing a proportionate increase of expense. These are the two difficulties which there is, no doubt, as much difficulty to overcome in Wurtemberg as in other countries.

Intellectual Instruction in the Wurtemberg Schools.—The intellectual instruction in the reform schools of Wurtemberg is in every respect similar to that which is given in the primary schools of that country. It comprises religious instruction, the history of the bible, reading, writing, the German language, written and mental arithmetic, the history of Wurtemberg, geography, and music; and to these essential branches others are added in some of the establishments. Four or five

hours daily are commonly given to lessons, according to the seasons and the demands of the field-labour. The instruction is given by the head of the family, who is chosen from among the certificated teachers. Each school has its little library, where the children can find books of amusing instruction, as well as their ordinary reading-books; and every six or twelve months, the children are subjected to an examination, which tests their progress and the amount of their instruction, and at which the members of the administrative committee give their attendance.

Industrial Education in the Wurtemberg Schools.—Agriculture generally forms the basis of the industry of the reform schools. Each of these establishments undertakes the cultivation of a piece of land more or less extensive, by the labours of the field, the garden, and the stall. The boys, under the direction and surveillance of the overlooker of the farm, perform all the requisite work, and in the course of it are taught the culture of trees and the training and grafting of those which bear fruit. They are also required to discharge the heavier of the house work; finding and cutting the wood, fetching the water, cleaning the halls, staircases, and passages, making their own beds, brushing their own clothes and shoes, &c. In most of the schools, there are, besides, for those periods of the year when the out-door work is much reduced, or altogether suspended, workshops of auxiliary industry, such as that of tailors, shoemakers, joiners, wheelwrights, weavers, bookbinders, &c. The children are also employed in many of the smaller articles, of which so long and interesting a list has already been given.

The girls are employed in all that more especially concerns the internal economy of the household—the cooking, the making and repairing of the linen, the laundry, sewing, and knitting. They participate, in some degree, even in the out-door work, taking charge of the kitchen-garden, the cow-sheds, and the poultry-yard, and giving their aid in the hay and corn harvest, and in the vintage, &c. In the choice of these occupations, it is especially designed to retain them in the humble sphere in which they were born, and in which their life should be passed, by carefully avoiding whatever might tend to lead them from or turn them against the subordinate employments upon which they must ultimately depend for subsistence, such as service, whether domestic or on the farm, nursing children, &c. Thus regarded, the labours of the farm schools form a part of their education; for though the round of occupations is thus strictly limited, the age, strength, aptitudes, and inclinations of the children are consulted, and by their varied succession it is contrived to avoid monotony or disgust. Labour thus loses the character of restraint, and assumes an aspect which causes it to be embraced freely and with pleasure.

Resources, Land, Stock and Expenses of the Wurtemberg Schools.—The resources of the reformatory schools vary in certain respects, and depend, in a great measure, on the benevolence of individuals; they are commonly derived from—

1. The interest of invested capital.
2. The price of board and education for some of the children, paid out of the king's privy purse, by the Benevolent Society, the administrations of the communes or of charitable trusts, the

institutes for orphans, or private associations of ladies and others in aid of the reformatory schools.

3. Allowances paid by private benefactors or the parents of the children.
4. Private donations and grants from Government (principally in wood), of the Benevolent Society, of the communes, of the king and royal family, of certain public establishments, of associations, and of individuals.
5. The product of loans, which amounted, in 1844, to 91,863 fl. 50 kr.
6. The produce of the land, the farm-yard, and the workshop; 17 establishments possess together 157 acres of land, and cultivate another 43⅜ rented acres; while the cattle and poultry numbered, in 1845, 58 milch cows, 24 heifers and calves, 46 pigs, and 34 head of poultry.

It is estimated that, from their origin to 1844, the reformatory schools had cost altogether the sum of 928,939 florins; or a million, with the receipts in kind, provisions, and clothing.

The cost of the first establishment of the nineteen reformatory schools of which we have given a list, approximates to the sum of 210,569 florins, sub-divided as follows:—

Building new edifices	78,000	Florins.
Appropriation of old edifices	45,000	,,
Furniture	37,135	,,
Capital required for commencing housekeeping and working the land	30,434	,,
	210,569	,,

The cost of maintenance of each child is estimated at an average of 60 florins annually. From the origin of the schools, in 1820, down to 1844, that is, during a period of 24 years, these establishments have maintained 2,684 children, the average of their sojourn being 4½ years. At the rate of 60 florins per child per year, the expense of maintenance amounted, during this period, to 724,680 florins. If this sum be added to the cost of the first establishment (210,569 florins), it represents a total expenditure of 935,249 florins, figures which correspond sufficiently with those of the receipts given above.

General Results in the Wurtemberg Schools.—If it is impossible to establish by exact figures and statistical data the results of the system of education adopted in the reformatory schools, it is, at all events, permissible to assign some reasons which tend to show that their labours have not been unprofitable.

In the first place, it is incontestable that, of the children that have been admitted to the reformatory schools, a certain number have been drawn from influences that must have ended in their ruin. Their health is improved; they have acquired many indispensable elementary acquirements; they have been restrained from idleness, and prepared for the exercise of useful professions; endeavours have been made to inculcate good principles into them, to instruct them in and habituate them to the practice of religious duties. In a certain number of schools, care has been taken to follow the children after their departure, and ascertain their position. For example, of 108 children that

had left, in the space of 16 years, from the reformatory school at Tuttlingen, there were only 5 or 6, principally girls, whose conduct was bad, and in those cases there were hopes of a return to the right path. The following return is from a recent report of the committee of this establishment:—

Children whose conduct is devoid of all reproach	58
,, ,, doubtful in some respects	25
,, ,, bad	6
Children who have died since their departure, quitted the country, or are lost to sight	14
Children whose sojourn at the school has been of too short duration to allow of the effects being appreciated	5
Total	108

Of 93 children who left the reformatory school at Kircheim, there were found—

Of good conduct	44
Of passable conduct	25
Of bad conduct	9
Not known	10
Of weak mind	2
Good at first—afterwards not known	1
Gone into other establishments	2
Total	93

We may remark, in conclusion, that the reformatory schools of Wurtemberg are still below its requirements. There are 270,000 children in the kingdom between 6 and 14 years of age; of this number, at least a fiftieth part may be said to fall under the denomination of pauper, vicious, or morally-endangered children, for whose sake the reformatory schools have been instituted. These 18,000 children would amount, in a series of twenty-four years, to 54,000; but during the same space of twenty-four years, the reformatory schools have admitted only 2,684 children, being rather less than a twentieth, and there have been only 1,623 departures. It is evident that, if even those who had left had escaped the degradation and ruin that menaced them, this fact would influence in a very slight degree the general condition of the children without the atmosphere of the reformatory schools, or the moral state of the country at large. It is requisite, therefore, to extend and complete the work, if it is to bear good fruit, and its influence be felt among the mass of the population.

Reform School of the Rauhen-Haus, near Hamburgh.

The reform-school of the Rauhen-Haus, near Hamburgh, was founded, in 1833, by the united efforts of a few charitable persons, aided by private donations, with the view of assembling and correcting the vicious and morally-endangered children of the city. Located at first in a modest thatch-covered house, whence its name is derived, it received, at successive periods, considerable augmentations; and it now occupies a considerable tract (of 3,800 verges of 16 square feet) upon which have been constructed, as necessity arose, about a dozen buildings, more or less spacious, each having its special application. These buildings are variously dispersed, or grouped in a picturesque manner, in the midst of surrounding gardens, and several have been erected

by the children themselves, with the aid of the "brothers" charged with their superintendence. This establishment consists of three divisions—

1. The reformatory school for the children, which contains, on the average, a hundred children, of whom two-thirds are boys and one-third girls.

2. The institute of brothers, composed of the staff assigned to the direction and superintendence of the different "families," serves, at the same time, as a preparatory or normal school for the young people designed for the home mission founded by M. Wichern, which has for its object to form moral agents, animated by religious principle, for the service of society and the advancement of Christian truth. This institute comprised 34 brothers in 1847, when 20 others had already left, and were variously engaged, as hereafter stated, in Germany, Russia, Switzerland, and America.

3. The printing and agency department, which comprises a bookseller's shop and workshops for bookbinding and stereotyping.

The organization of the Rauhen-Haus has been based on that of the natural family. The children are classed in groups of twelve each, forming a family, at the head of which is a superintendent discharging the duties of father. All these again are attached to their common centre, or father, the director, who presides over the whole, and watches over their general interests. The chapel, the school, and the workshops alone are common to the whole; and these serve, in some degree, as a board of association among the different families, who there meet at certain intervals. But it is needless again, to go into the details of the children's management, which, in all its main features, has been copied at Bächtelen and in other institutions noticed in this paper, in the pages of which nothing new would really be learned by the repetition, except the fact that no practical study of its subject can be complete without a visit to this institution. On the other hand, its bookmaking and bookselling departments cannot be generally imitated, and I would, therefore, restrict attention to the general statistics of the establishment, and a brief sketch of its normal school department, as the most advanced model of its kind.

The institute of "Brothers" at the Rauhen-Haus, like that of the "Contre-Maîtres" at Mettray, forms the basis of the whole organization. M. Wichern perceived as clearly as MM. de Metz and de Brétignères, that the work of improvement among vicious and delinquent children could not be confined to merely mercenary hands, and that it was a condition of success to employ motives superior to those of merely material existence. The "brethren" of the Rauhen-Haus may be compared, in some respects, to the "frères de Charité" and "frères de la Doctrine Chretienne" in Roman Catholic countries.

As a qualification of admission to the institute, proof must be furnished of conduct that has always been honourable and devoid of reproach, of the constant practice of the duties of a good Christian; of being animated with a true religious calling; of exemption from all physical infirmity, and the enjoyment of good health and a sound constitution; of a knowledge of agriculture or of some trade available in the establishment, or, at all events, of being endowed with the necessary aptitude for acquiring one or other of these professions; lastly, of the

possession of a certain amount of learning or intelligence, and the necessary will to profit by the special instruction organised in their behalf in the institution. They are required, on the other hand, to bring the consent of their parents to the career which they wish to embrace, and a certificate of freedom from military service. The age of admission for brothers is usually from 20 to 30 years of age. Notwithstanding the rigour of these conditions, candidates have never been deficient, and their number has usually exceeded that of the vacancies. The institute of brothers, like the school of reform, is supported by private subscriptions and donations, has its own treasury, its budget, and its separate accounts.

In their relations with the latter establishment the brothers are charged with everything that concerns the direction of the families and the supervision of the children confined to their care; they cannot be out of their sight an instant by day or night; they take their meals with them, sleep in their dormitory, direct them in their work, accompany them to chapel, and participate in their recreations and games. Attached at first to the families in the quality of assistants, after a certain time of trial and apprenticeship they take the direction in their turn; they visit the parents of the children, and report to them on their conduct and progress; exercise over their pupils, after their departure, an active patronage and benevolence; give instruction in the elementary classes; assist the direction in religious teaching, and keep up the writing and correspondence of the institution. The transfer of the assistants from family to family, every month, places each brother successively in contact with all the children, extends the circle of his experience, facilitates his progress, and, at the same time, assists in the propagation of useful practices, and, as it were, places the experience acquired in each individual group at the service of all the families.

Independently of the exercise of these duties, the brothers participate in a course of special instruction, over which the director, assisted by two principal instructors, presides. This teaching occupies twenty hours per week, arranged in a manner to coincide with the working hours of the children: it comprehends religion, sacred and profane history, the German language, geography, pedagogy, singing, and instrumental music; there is also a special course of English. The pupils are classed in two courses, or divisions, each directed by one of the teachers. The duration of each course is two years, so that the education of each brother embraces an average period of four years. At the expiration of this time the brothers ought to be prepared to fill the duties of the "mission intérieure," of which they are agents; and on their departure from the institute they are usually placed in one or other of the following positions:—

Chiefs and fathers of families in the reformatory schools, organised upon the plan of the Rauhen-Haus.

Overseers and peculiar assistants, charged with moral discipline in establishments dedicated to infancy.

Teachers in the like establishments.

Teachers in rural schools.

Directors, stewards, overseers, or guardians in prisons of various organization.

Directors or fathers of a family in the hospitals and charitable establishments.

Overseers of infirmaries in the hospitals.

Agents of provident and benevolent societies.

Missionaries and preachers in the American colonies.

Home-missionaries among the artizan classes.

The number of applications for brothers to fill these and kindred employments increases each year, so that the director is incessantly compelled to extend the normal institute designed for their preparation.

The director manages the finances under the control of an administrative committee, composed of twenty members, chosen from amongst the founders and benefactors of the establishment. Each branch of the work has its separate account—

1. That of the reformatory school.
2. That of the institute of brothers.
3. That of the printing department.
4. That of the agency book department and library, with their dependencies.
5. That of the children's savings' banks, where each opens a separate debtor and creditor account.
6. That of the brothers' savings' banks.
7. That of the fund for necessaries on departure.
8. That of the private gifts for specific objects.

The accounts of 1844 and 1845 show the receipts to have been, for the reformatory school, as follow.

RECEIPTS.

	Mc.	Cns.	Fr.
1. Produce of subscriptions	7,375	12	0
2. ,, voluntary donations	2,214	10	3
3. ,, annual payments for children	6,603	8	0
4. ,, box for gifts at the establishments	580	3	6
5. Miscellaneous receipts	124	0	0
Total	16,898	12	9*
	(Fr. 25,855,20)		

The agricultural produce and that of the workshops are not included in this sum, nor private gifts for specific purposes, such as gifts in kind, which form a very important item every year, and tend, at the same time, to diminish the expenses of the establishment. The expenses for the same year balance exactly with the receipts; and as the total establishment consisted of only 100 persons, of whom 14 were employed in the management, and only 86 were children, the average cost reckoned on the latter only, was no less than 300 francs per annum, as here brought to account The fixed capital at the same date was worth 20,892 francs, and the floating capital 32,690 francs.

Düsselthal.—The Prussian establishment at Düsselthal cost, in 1849, the sum of 32,033 francs, which, divided by 178, the number of children, gives for each an average of 180 francs per annum, or about 50 cents. per day; but this calculation will not include the gifts in kind, which are considerable, the produce of the cultivation, nor the profits of the workshops.

* The *marc* of 16 *schellings,* since the Convention of Lubeck, has been worth 1f. 53c. French.

Having thus given a rough historical sketch of the growth of farm schools for charitable purposes, and their application to reformatory discipline, in the Protestant countries of the continent, which, in the absence of a workhouse system of poor laws, have been the real leaders in this important movement, we shall be enabled to convey, without elaborate explanation, some conception of their moral and economical progress in France; the honourable exertions made by the philanthropists of which country, owing to our ready access to it, appear to have engrossed our attention rather too exclusively.

Reform Schools and Juvenile Agricultural Colonies of France.

The creation of agricultural colonies in France, states M. Ducpetiaux,* is of recent date. Excepting the Protestant establishment at Neuhof, near Strasburg, which dates from 1825, but whose humble existence was almost unknown, and the colony of Mesnil-Saint-Firmin, the foundations of which were laid in 1828 by M. Bazin, but which has been brought into any considerable importance only since 1845, it must be conceded that we owe the first institution of this kind, really worthy of the name of a *colony*, to the generous efforts of MM. de Metz and de Brétignères de Courteilles. This is the colony of Mettray, founded in 1839, which, indeed, has been the type and example of most of the agricultural colonies that have been formed in France during the last ten years.

These establishments have generally had their origin in private charity, seconded, to a certain extent, by the administration of the several departments or communes, and aided by grants from the Government. They may be divided into two principal classes,—those which contemplate the education and instruction of pauper, orphan, foundling, or deserted children, and those which are directed to the training of young offenders, and especially of children acquitted under Article 60 of the Penal Code, as having acted without knowledge, but detained to be brought up to a specified age. Among the latter establishments another distinction may be drawn between the penitentiary colonies, founded and directed by private individuals, and those attached to central houses of confinement, and managed by the State.

According to all the information that can be gathered, France has 41 agricultural colonies, of which the subjoined is a list (see pp. 28, 29), stating also the departments in which they are situated, the date of their foundation, the names of the directors, whether organized round a lay or clerical centre, the extent of their land, the numbers in each establishment, and the average daily cost of each individual's maintenance.

It appears from the statement that there are in France and in Algeria 41 home-colonies for children and young persons, which may be classed as follows:

* "We have borrowed part of the following facts," says M. Ducpetiaux, "from the 'Notice sur les Colonies Agricoles de la France,' by MM. de Lamarque and Dugat, published in the 'Annales de la Charité,' Nos. 2 to 10, 1850."

Classes of Institutions.	Number.	Extent of Land.	Number of Inmates.	Daily Average Cost of Maintenance.
				F. C.
Penitentiary colonies founded and directed by private individuals	12	2,988	1,933	1 18
Penitentiary colonies directed by the State	4	1,052	384	0 77
Colonies of orphan, foundling, deserted, and pauper children	25	8,375	1,582	0 81
Totals	41	12,415	3,899	0 $84\frac{4}{11}$

In the average daily cost of maintenance, the interest of capital and the rent of land and buildings are not generally included. If these be included, and we then subdivide the average daily cost per head into its several elements, we have the following results:

Number of Colonies Averaged.	Food.	Clothing, Bedding, Sicknesses.	Establishment, Instruction, and Miscellaneous.	Interest of Capital and Rent.	Gross Average.
	C.	C.	C.	C.	F. C.
12 Penitentiary Colonies founded and directed by individuals	41	27	30	30	1 28
4 Penitentiary Colonies directed by the State	47		30	24	1 01
19 Colonies of orphan, foundling, deserted, and pauper-children	42	19	21	28	1 10
General results	42	22	26	28	1 18

According to the accounts collected by MM. de Lamarque and Dugat, the value of the buildings of the 41 colonies may be estimated at 3,000,000 francs, that of their land at 1,750,000 francs, and that of their stock and tools for husbandry at 450,000 francs; making a total of 5,400,000 francs, or 216,000*l.*, and an average foundation-capital for each colony of 131,707 francs, or 5,292*l.*

Of these 41 establishments, 18 are directed by laymen, 15 by ecclesiastics or religious bodies, and 8 are under a mixed direction, partly lay and partly religious. Three of the establishments are specially devoted to Protestant children, and two of these receive children of both sexes; but all the rest are exclusively for boys. There is, however, a special establishment for young girls under confinement near to Montpellier, under the name of the Solitude of Nazareth, and managed by M. l'Abbé Coural.

Designation of the Colonies.	Department.	Year of Foundation.	Directors.
A.—*Penitentiary Colonies Founded and Directed by Individuals.*			
1. Colonie de Mettray, near Tours.....	Indre-et Loire	1839	MM. de Metz et Brétignères
2. ,, Industrielle et Agricole de Marseilles	Bouches du Rhone	1839	Abbé Fissiaux
3. ,, de St. Louis, near Bordeaux....	Gironde	1841	Abbé Buchon
4. ,, Evangelical du Ste Foy	Dordogne	1843	Pasteur Martin
5. ,, du Petit Quevilly, near Rouen	Seine Inférieure	1843	Lecointe
6. ,, d'Ostwald, near Strasbourg....	Bas Rhin	1841	Krauss
7. ,, du Val d'Yvre, near Bourges	Cher	1847	Charles Lucas
8. ,, de Citaux	Côte d'Or	1849	Abbé Rey
9. ,, d'Oullins, near Lyons	Rhône	1848	id.
10. ,, du Petit-Bourg, near Paris	Seine-et-Oise	1844	Allier
11. ,, de St.-Ilan	Côte du Nord	1843	A. Duclésieux
12. ,, de Boussaroque	Cantal	1848	Martel
B.—*Penitentiary Colonies Founded and Directed by the State.*			
13. Colony de Fontevrault.....	Maine et Loire	1842	.....
14. ,, de Clairvaux.....	Aube	1843–1847	.....
15. ,, de Loos.....	Nord	1844	.....
16. ,, de Gaillon.....	Seine Inférieure	1845	.....
C.—*Colonies for Orphans, Foundlings, and Deserted and Indigent Children.*			
1. Colonie de Mesnil-St.-Firmin.....	Oise	1837	Bazin et Abbé Ca
2. ,, de Saverdun	Ariége	1840	Le Pasteur
3. ,, de St. Antoine	Charente Inférieure	1841	Richard
4. ,, de Launay.....	Ile de Vilaine	1841	Enoch
5. ,, de Caen	Calvados	1842	Leveneur
6. ,, Asile-école Fénélon, Vaujours	Seine-et-Oise	1843	Leguay
7. ,, d'Allonville (Petit Mettray), near Amiens	Somme	1849	De Rainneville
8. ,, de Lesparre	Gironde	1844	Le Masson
9. ,, de Bonneval.....	Eure et Loire	1844	Chasles
10. ,, de Montmorillon	Vienne	1844	Abbé Fleurimo
11. ,, de Drazilly	Nièvre	1846	Salomon
12. ,, de Plougerot.....	Haute Marne	1847	Abbé Bizot
13. ,, de Cernay.....	Haut-Rhin	1847	Risler
14. ,, de Notre Dame des Vallades....	Charente Inférieure	1843	De Luc
15. ,, des Ronces	id.	....	id.
16. ,, de Medjez-Amar	Algerie, Depart. de Constantine	1847	Abbé Landman
17. ,, de Ben-Akoun.....	Près Alger	1842	Abbé Brumaul
18. ,, de Belle-Joie	Côtes du Nord	....	Abbé Lemercie
19. ,, de la Lande au Noir	id.	1847	?
20. ,, d'Apprentis	id.	1847	A. Duclésieux
21. ,, de Notre Dame des Champs....	Hérault	1848	Abbé Soulas
22. ,, d'Arinthod	Jura	1850	?
23. ,, de Mairsain	Indre et Loire	1850	Chambardel
24. ,, de Willerhof.....	Bas Rhin	?	Abbé Nil
25. ,, du Neuhof, near Strasbourg....	id.	1825	Krafft

Preventive and Reformatory Education.

gious or Lay.	Extent of Land in Hectares.	Population.	Mean Cost of Daily Maintenance. F.	C.	Observations.
Lay	201·00	536	1	86	
Religious	6·56	236	1	44	
Religious	45·00	200	0	74	
Lay	6·00	53	1	60	Protestant establishment, for children of both sexes.
Lay	26·00	150	1	07	
Lay	101·00	184	0	85	Originally appropriated to adult mendicants.
Lay	160·00	132	1	46	
Religious	300·00	57	0	85	Should be appropriated to the reception of 500 children.
Religious	3·00	15	0	83	This establishment was destroyed in 1848, and is in course of reconstruction.
Lay	96·00	300	1	29	Originally appropriated to poor children and orphans.
and Religious	54·00	28	0	96	
Lay	200·00	42	?		
Lay	60·00	58	0	79	Attached to the "maison centrale."
Lay	235·00	130	0	77	id. id.
Lay	34·00	100	0	90	id. id.
Lay	92·00	96	0	61	id. id.
and Religious	155·00	69	0	79	
Lay	60·00	100	0	51	Protestant establishment.
Religious	95·00	50	0	55	
Religious	30·00	41	0	74	
Religious	20·00	34	0	60	
Lay	12·00	400	0	72	
Lay	100·00	25	1	30	
Religious	16·50	50	0	72½	
Lay	40·00	116	0	60	
Religious	368·00	25	0	67	Should be appropriated to receive 250 children.
and Religious	12·00	45	0	90	Attached to the farm-school at Poussery.
Religious	158·00	12	0	90	
Lay	30·00	30	0	62	Organized on the plan of the Swiss rural schools.
Religious	10·00	44	0	80	Attached to the colony of Notre Dame des Vallades.
Religious	570·00	....	....		
Religious	500·00	52	0	90	A branch of the colony of Notre Dame des Vallades.
and Religious	100·00	317	1	0	
and Religious	72·00	20	0	80	A branch of the Establishment of St. Ilan.
and Religious	50·00	20	0	88	id. id.
and Religious	....	18	0	83	Attached to the penitentiary colony of St. Ilan.
and Religious	22·00	28	1	35	
Religious	21·00	4	0	80	
Lay	100·00	15	0	81	Attached to the farm-school at Marolles.
Religious	....	....	....		
Lay	9·00	67	0	61	Protestant establishment for children of both sexes.

The oldest of these colonies, that of Neuhof, dates from 1825, but 33 were founded at the much later period from 1837 to 1848; and 7 have been brought into existence or reorganized since the revolution of February, 1848. Since this latter period, on the other hand, three colonies have been suppressed,—that of Montbellet (Saône et Loire), that of Monsigné (Sarthe), and that of Grand Jouan (Loire Inférieure), which has been converted into a district school of agriculture. The colony of Petit-Bourg, which was at first exclusively directed to the rearing of orphan and pauper children, has recently made an engagement with the Government for the admission of a certain number of young offenders acquitted as having acted without "knowledge" (discernement). A similar change has also come over the colony at Ostwald. It thus appears that though the events of 1848 caused a passing disturbance in the affairs of these establishments, yet that the vitality of the institution, as a whole, has been sufficient to meet the crisis, which seems even to have called forth new exertions.

The colonies of France present types of all the forms of farm-school organization employed in the different countries of Europe. In some the occupations are exclusively agricultural, while in several it is endeavoured to combine other industrial occupations with field labour. This combination is the more judicious, since it permits some reference to the future vocation of each child, and gives an opportunity of his exercising himself in that which promises to be of most use to him after he has left. "In our opinion," says M. l'Abbé Fissiaux, "it would be a loss of time to employ in field labour the son of a weaver or of a joiner living in a town. After his liberation, it is obvious that the prodigal son, returned to better feelings, is attracted back again by his family, especially if it be a good one; and that it is important to secure to such a child some means of gaining his livelihood, and not being a burden to his parents. On the other hand, we make farm labourers of orphan, foundling, and deserted children, and those born in the country or belonging to bad parents. But the son of a shoemaker will be made to learn the trade of his father, in like manner that the son of a joiner or a weaver will receive an industrial education adapted to attach him likewise to the paternal home."

If the small colonies have the advantage of being established without too serious an outlay, and of presenting in many respects the attributes of the family, they offer also certain difficulties, arising out of the small number of men capable of directing them properly. Hofwyl has been a sort of nursery of managers and teachers; but in France, with the exception of the preparatory school at Mettray, especially designed to train the agents required for the various services of the colony itself, there exists no normal establishment similar to that of Wehrli, or the school of "brothers," annexed by M. Wichern to the agricultural colony of Horn, near Hamburg (the Rauhen-Haus). The design is undoubtedly good, which has been adopted by M. Bazin, in instituting a lay order, that of the "Frères Agronome" (agricultural brothers) of St. Vincent de Paul, to which he has intrusted the direction of the agricultural colony of Mesnil St. Firmin; but this institution is too recent, and its scale is too narrow, to have yet produced much effect.

The undertaking at St. Ilan, founded by M. A. Duclésieux, also aims at forming assistant masters and monitors for the small colonies; but its operation is limited to the department of Brittany: and although it has already given rise to two affiliated institutions, we have yet to wait for decisive results.

In France, then, as in Belgium, the practical question is whether preference should be given to large or to small agricultural colonies. The Belgian view is that sufficient effect can be produced only by an establishment vast enough to permit every form of experiment in the organization of a series of various works, graduated according to the ages, the powers, the aptitudes, the necessities, and the future objects of the colonists. Such is especially the design of the reformatory schools which are being organized at Ruysselede; and when this institution shall be in full operation, it will have hereafter to be decided whether it is requisite to erect other establishments of the like character on the same scale, or whether it may not suffice to form (on the model of the detached farms of Mettray) branch establishments in direct communication with the parent institution.

In France, where the formation of the greater part of the agricultural colonies for children has been the work of individuals, their objects are as various as their organization; and they have simply opened a vast field to discovery and experiment of every kind, without much care, as yet, for the uniform system to which it will become advisable ultimately to reduce them. In Belgium, on the contrary, where the initiative has been taken by the Government, on a much larger scale than in France, the reformatory schools have been instituted by virtue of a law which applies to the whole realm, and admits to a participation in its benefits every mendicant, vagabond, pauper, or morally-neglected child, found in certain defined circumstances. The design is not merely to come to the rescue of some children only of a given class or locality, but to compass the reform of the whole of a youthful population, heretofore condemned, by the extreme misery, the vices, the negligence, or the thriftlessness of their parents, to be swallowed up and lost in the depôts of mendicity and the prisons. In fine, it is boldly attempted to extinguish pauperism in Belgium by the education and apprenticeship of all its mendicant, vagabond, and pauper children; and in the course of this endeavour the highest refinements of discipline and economy have to be brought into practical use.

Mettray is regarded as affording almost sufficient example of the former; but, in regard to economy, the French institutions are by no means regarded as offering a good standard, in their average of 85 cents per day per head, with the variation to the extremes of 51 cents at Saverdun and 1f. 86c. at Mettray. It must be observed, however, that the high rate of the daily cost of maintenance in some of the establishments arises not merely from the number and the rate of payment of the persons employed in the management, and from the regard which by their agency is paid to the physical, moral, intellectual, and industrial condition of the children, but far more to the scantiness of the profit, or rather to the positive loss on the labour which is pursued in each. In this respect, the recent experience of the colony of the Val d'Yvre commands a very special attention, since the work

here undertaken is on a large scale, and the interest of the proprietor is intimately allied with that of the administration which entrusts him with its young labourers; and the extent and nature of the cultivation is in proper relation to the number of hands for effecting it.

The reforms to which it is hoped this experience, if successful, will give rise, will be considered sufficient, and even complete, in France, if, in all the establishments of this kind, they succeed in reducing the average cost of maintenance per head to 60 or 70 cents. Recently, indeed, the Government did not hesitate to allow 80 cents per head for each child placed in one of the colonies, besides a sum of 80 francs paid down for an outfit. But since the revolution of February, 1848, the allowance per head has been reduced, as a measure of economy, to 70 cents per day, and 70 francs for outfit. In Belgium, the law of the 3rd of April, 1848, which establishes the reformatory schools, limits the cost of maintenance to be paid by the communes for the children and young persons admitted into those establishments to the rate already allowed for the paupers and mendicants in the depôts of mendicity. Since this rate does not exceed from 35 to 40 cents, and may yet further be lowered by various circumstances, such as a decline in the price of provisions, the Belgian colonies, if they adhere to these limits, must provide for all their wants at a lower cost by one half than the French as a bare minimum. It is a necessity which demands that the greater part, if not the whole, of the expenses of the reformatory schools shall be defrayed by the work of the colonists themselves, a necessity which French experience does not afford much hope of their meeting with success.

The economical position of these institutions, and their economical management, has occupied so much of our time and attention, that it will be impossible, on the present occasion, to enter into the details of their *highest* moral application in France, and its imitation in Belgium, England, and America, in the *reformation* of juvenile offenders; an application of which (in imitation of the Rauhen-Haus and of Bächtelen) Mettray now presents the highest example, and that which must be regarded as the type of all the more recent efforts of the same kind. Postponing for the present, therefore, any details of this and of the other correctional farm-schools of France, I would beg permission to complete our glance at the *pauper* farm-schools of the continent, by calling more especial attention to the agricultural colony of Mesnil-St.-Firmin, in the department of Oise, founded, so early as 1828, by M. Bazin, for the rearing of orphan children in agricultural labour, but extended in its scheme since 1840, in co-operation with the Society of the Friends of Childhood, and, since 1843, in conjunction with the Society of Adoption, in Paris; the latter founded under the presidency of M. Molé. To meet the difficulty of obtaining proper moral agency for the management of the young people, by adding the motives of religion to those which might otherwise animate them, M. Bazin has instituted an order of the agricultural brothers of St. Vincent de Paul, in aid of which the Society of Adoption itself did not hesitate to contribute. "This religious corporation, composed, nevertheless, entirely of laymen, has for its object to supply directors or assistants to agricultural colonies of pauper children and especially of foundlings. Above all, *labourers*, the agricultural brothers have no

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uniform but that of labour; and if they are distinguished from other agriculturists, it is by their self-denial, their devotion to the common cause, and by that internal consciousness of a divine reward which doubles their powers, and fills their hearts with fresh goodness." The children are kept from about eleven years of age, when they make their first communion, until about seventeen or eighteen, in the cultivation of about 135 hectares of land at Merles, while the younger children are kept at Mesnil, in the charge of five sisters of the order of St. Joseph, assisted by four "novices." Some of the trades subordinate to agriculture are also carried on by the boys, and the "brothers" in charge of them are placed in every respect on the same footing, take their meals with them, and have only the same accommodation for rest. After four or five years passed at the colony, the children all know how to read, write, and calculate, pretty well (although the instruction is carried on only during winter), and have made some little progress in other elementary instruction. Religious training is limited to instruction in the catechism until the first communion, and afterwards the children are taught the principal truths of religion.

A separate institution, in direct imitation of the more recent farm-schools of France, was opened by M. Bazin, in correspondence with the Government, in 1848, for not more than thirty-six young people, from sixteen to twenty years of age, who were boarded and educated in agriculture at the rate of 175 francs per annum each, paid by the Government in the nature of an exhibition, where a candidate otherwise qualified to enter upon this superior agricultural instruction is destitute of pecuniary means to pursue it. The farm which they cultivate is one of 250 hectares, with ample buildings and stock, and ten labourers in constant employment, including several who are Flemish; the whole being a model of management, one feature of which scarcely, however, accords with our ideas, viz., the feeding of 150 to 200 swine on the flesh of the 400 or 500 horses that are annually killed at Mesnil.

The Fenelon School-Asylum at Vaujours, in the department of Seine et Oise, founded in 1843, by M. le Curé of Vaujours, deserves especial mention, as having increased, from its modest original of twelve to fifteen boys, to no fewer than 400, in 1850, chiefly orphans, children deprived of at all events one parent, illegitimate children, and those who, through the occupations of the parents, or otherwise, are deprived of natural guardianship. The committee of management is regarded as holding the place of father towards these poor children; to fill that of mother towards them, a maternal society of lady-patronesses has been formed, to visit them periodically, with especial regard to the tone given to the hearts and minds of the children; and they find brothers in the society of young protectors, formed of the boys in families of good circumstances, and particularly of the youths in the Bonaparte Lyceum, who apply to the use of the asylum a monthly collection, visit it whenever they can, and by this kind assistance do themselves much more good than they do to the poor children whom they have adopted as brothers. The children leave at thirteen years of age.

The establishment at Neuhof, near Strasbourg, founded in 1825, is

for Protestant children only, on the plan of the Swiss and German schools, and, therefore, for both sexes; the number of boys, in September, 1850, being 41, and of girls 26, of whom the boys are subdivided into three and the girls into two families, each under the superintendence of a special agent; the Père and Mère (Hausvater and Hausmutter) being aided by a teacher for the boys, 2 superintendents for the girls, 3 labourers, a gardener, and a cook; the whole establishment costing less than 3000 francs a year, exclusive of the board and lodging, which they receive on the establishment. The workshops have been abandoned, on account of their cost being greater than any profit derived from them; and the labour of the children is now restricted to the cultivation of the soil and the household duties "The simple and paternal rule which here prevails, and the admirable order which presides over the whole economy, are examples which may be imitated with advantage in several of the colonies formed more recently in France. Religion alone can accomplish such a work; it is not with a view to worldly advantages alone that men devote themselves, for a trifling salary, to carry out a mission which demands great sacrifices and painful labour every day and every hour. The spirit of true piety which prevails at Neuhof is even touching, and it is from this spirit more especially that the worthy director, and those who aid him, derive their power and their success."

The only other institution in France which we can here afford space to notice is that of St. Nicholas, at Paris, founded on a very modest scale by Monsignor de Bervanger, in 1827, but which, since 1846, has contained about 900 children, of very mixed origin, variously collected by charitable societies and generous patrons, and many of them known only by the number assigned to each. The payments are 20 francs per month for orphans, and 25 francs for other children; and the establishment, for this small sum, provides maintenance, instruction, and apprenticeship to a trade. Although the system of education is essentially religious, the director, in deference to the manners and prejudices of the workpeople of Paris, has refrained from giving it any clerical or monastic character; and though the teachers whom he employs are called "frères," they are all laymen. Seventy persons in charge live in the establishment, in the Rue de Vaugirard, No. 112, or in the house for the younger children at Issy; and, with the 25 master-workmen, who live out of the house, this gives an average of 1 employé to every 7 or 8 children,—a proportion which ensures a vigilant surveillance, day and night.

The "frères" extend their care not merely to the instruction of the children, but also to their education. They endeavour to give their pupils notions calculated to insure their future well-being, to make them honest, industrious, and able workmen, to give them a love for manual labour, to destroy conceits which could be reconciled only with the advantages of fortune, and forewarn them against the bad examples which they will find in the world around them. There is every convenience for active games in a contiguous field in Paris, and a large basin at Issy is available and used for bathing and swimming.

But the remarkable peculiarity of this school is the organization of its industry in workshops, which are hired, together with the appren-

ticed services of the children, by master-workmen of approved cha racter in various trades, such as chasers in bronze, watchmakers, designers for stuffs, makers of mathematical instruments, jewellers in gold and silver, engravers on precious stones and metals, and all the multifarious occupations, half arts, half trades, which supply the numerous articles of refinement which are specially produced at Paris; and all these in addition to the ordinary trades of baker, shoemaker, tailor, &c. All this industry was grievously disturbed by the revolution of February, but is still sustained. The children do not go to these workshops except on the express requirement of their patrons, and after they have made their first communion; and those employed give, on the average, eight hours and a half daily to work, and two to instruction in classes, unless their advancement in the trade be sought with such special earnestness by their patrons as to preclude this. The apprenticeship is for two, three, or four years, according to the profession; and after its close, the young people may remain in the establishment, pursuing their work, and depositing what they earn, beyond the cost of their sustenance, in the savings-bank. The employers find materials, tools, and skill, and take the profits of the trade, undertaking to treat the children well, as kind and faithful masters. Out of the total cost of the establishment in 1844, amounting to 199,217f. 62c. of which the workshops produced only 10,782f. 57c.; so that the charge of each child, on the average of the 750 then in the school, was 251f. 25c.; and it is calculated that, to carry out this plan of education with every fair appliance, each child should be calculated to cost 300f. per annum.

Agricultural Colonies of Belgium and Holland.

In Belgium, the fermes-hospices of Flanders, already described, are of recent date; and it is unnecessary to go into details respecting the efforts made, without success, at Wortel and Merxplas-Ryckevorsel, in the wastes of Antwerp, founded so early as 1820, in imitation of the now bankrupt colonies for adults in Holland. The former was a free colony for adults, and the latter for the correction of adult mendicants and vagrants of both sexes. A part of the mendicants and destitute poor in the Depôt de Mendicité at Hoogstraeten also are employed in agricultural labour; and preparations are making to the same end at that of Reckheim; while a number of young delinquents are employed in the cultivation of thirty acres of land at St. Hubert. But the great experiment of reformatory discipline on the land, making by the Government, at Ruysselede, under the direction of M. Ducpetiaux, is exclusively for children and young persons, and, as the centre of all new experience, will demand special notice on a future occasion. The home colonies of Holland, on the other hand, have been chiefly for adults, with a double view of suppressing mendicancy and vagabondage, and cultivating waste lands; and their failure, therefore, though a subject of interesting special study, is one foreign to our present purpose.

Condition and Prospects of Farm-School Education in England.

In England, the history of public and private charity has yet to be written. It would be a far finer subject for a historical essay than

that towards the elucidation of which I am now collecting a few dispersed facts. It dates at the latest from the Reformation, when the royal hospitals of London were organized as a complete system for the relief of indigence and the repression of vagabondage in the Metropolis, previously to the enactment of poor-laws for the whole kingdom, in the reign of Elizabeth. These laws have undergone various revolutions, with the changes that have successively come over the social philosophy of the governing classes; but they have long rendered impossible such a state of things as that which has been described as recently existing on the Continent. Another effect has been, that, with our economical distrust of pauper labour coming into competition with free labour, seconding a vulgar but natural jealousy lest the child of the pauper should receive a better education than that of our neglected classes of unskilled labourers, the workhouse school, in which the orphan and deserted children are placed out of daily observation, has too commonly been a mere sink of idleness and sloth, deeply tinctured with contamination from its vicinity to the adults in the house; and hence the very natural reclamations of the prison inspectors.

Among the inspectors under the new poor law who were most deeply grieved to witness this state of things, and most honourably exerted themselves to remove it, the names of Dr. Kay, now Sir James P. Kay Shuttleworth, and of Mr. E. Carleton Tufnell, deserve especial mention, not merely for their efforts to improve the character and management of the pauper schools of the Metropolitan district, and especially that at Norwood, but also, by their able reports and their sacrifices of money and labour, in the formation, with the aid of the Marquess of Lansdowne, and of other friends and patrons, of the Normal School at Battersea, for the training of teachers for pauper schools and schools for the poorer classes,—an institution now possessed by the National School Society, and forming perhaps the right hand of its strength. No definite results as to industrial training have, however, been realized by any of these efforts, nor, as yet, by those making at Kneller Hall; a normal school more recently founded by the Goverment at Twickenham, on a very handsome scale, in the same views and by the force of the same genius with which the work was commenced at Battersea.

Reports to the Poor Law Commissioners by the gentlemen above named, and several others, on the subject of the pauper schools, were published in 1841; but it was not until 1846-7 that these schools came under the active regard of their Lordships of the Committee of Council on Education, in the administration of an annual grant of 30,000*l.* made by the House of Commons expressly for their improvement. The two volumes of minutes and inspectors' reports upon them, which have since been published, are of the highest interest and value. The present state of the schools, as revealed by these reports, is painful in the extreme; but it is needless that I should here occupy your time with an abstract of records, which are so easily accessible to all. The extent and importance of the subject will be better appreciated by a glance at the following figures. (See p. 43.)

It must be confessed, however, that there exists a painful confusion, as well as a lamentable deadness, in regard to the course which it is

best to adopt with the pauper child, which leaves too undefined the combination of qualities which ought to be sought in its teacher, and permits merely local feelings and momentary influences to predominate in his appointment. Thus, while the system which the inspectors found in existence in 1848 was very wretched (and can never essentially be otherwise, so long as the children are cooped, for idleness and contamination, in the common workhouse itself), the experience of the world at large is opposed to their universal recommendation of large district schools; the progress of which, in the few instances in which they have been erected, in the north of England, appears, by the inspectors' reports of the following year, to have been far from satisfactory; while those erected or erecting in the vicinity of London are of too recent origin to afford any available experience. I cannot refrain, therefore, from quoting the words in which Mr. Tuffnell, in his report for 1849, so pleasingly records, as a passing phenomenon, the accidental existence, in a few cases, of that cheap happiness and hopefulness which I would entreat my fellow countrymen to aim at securing, with the humble additions that it may require, for every pauper child in the kingdom. "In the absence of district schools," he says, "the union schools which, to my mind, best fulfil the object of their institution, are those which are kept quite separate from the adult paupers, in a distinct building, with plenty of garden-ground, and placed under the care of an honest, painstaking, married couple. Such an establishment frequently presents the aspect of a well-ordered family; and though the intellectual instruction is often somewhat deficient, habits of industrious application are acquired, and right principles of action inculcated, so that education in its highest sense is imparted to the pupils. Children sent forth from such establishments, though sometimes wanting in technical knowledge, appear in most respects to fulfil all the objects that the philanthropist might deem desirable, and realise in their future lives the idea of an upright and christian-minded peasantry."*

Indeed, notwithstanding the boldness with which the Government of Belgium has undertaken the suppression of mendicancy and vagabondage in the whole kingdom, by the large institution which it has formed at Ruysselede, I cannot but regard it as surprising that the continental experience of farm-schools should have heretofore been read as an encouragement to our throwing the pauper children together in vast masses, each with its palace of brick or stone, and its comparatively mechanical system; and, on the other hand, developing industrial education in connexion with the common day-school. Since it is already barely possible to support the latter by the voluntary means on which it depends, its industrial department, when one is added, has to be conducted with a serious loss to the managers and little benefit to the children, for the simple reason that their voluntary attendance is not permitted by the parents to be of such constancy and continuance as to be of much productive value. The school-time which the poor allow to their children is, in fact, scarcely sufficient for their instruction in the common elements, before they go to the industrial training (by

* Minutes of the Committee of Council on Education. Reports by Her Majesty's Inspectors of Parochial Union Schools, 1848-49-50.

no means defective of its kind) by which they must earn their bread.

Every school should, if possible, have its garden divided into little reward plots among its best and eldest children, each cultivating separately his own, under the kindly advice of the teacher, with a stock of tools as various as can be brought into useful application within such limits; but with a *voluntary* day-school attendance, a "common" farm plot cannot be cultivated to a profit, or to a loss so moderate, as, under the circumstances of their too brief attendance at school at all, will be worth incurring, for any advantage gained by the attempt; and this assertion will apply with still greater force to any kind of workshop. I am not here speaking, on the one hand, of the pauper children for whom the farm-school (and some dependent workshops) *ought* to be supplied, and who, wholly dependent on society for their subsistence, will, in employment upon it, reduce the cost of that subsistence, while they receive the most wholesome training; nor, on the other, of the neglected and morally-endangered class contemplated by the ragged schools of our large towns, and for whom the industrial department should, at any cost, be made effective, since they have no home guardianship which, by placing them out to work, will in any degree supply the place of it; but of the children of the great body of our well-conducted labourers and artizans, with whose circumstances in the towns we are generally well acquainted, and for whose social position in reference to this subject in the rural districts, I have taken the liberty of referring to a very competent authority, that of our Vice-President, Sir John P. Boileau, Bart., in the lingering hope that industrial training might yet possibly be associated with the day-school, if this could be regarded as a store, for the neighbouring employers, of child's labour, to be taken out of it on a half-time gangsman system. These are the words of his reply, which seem to me to convey the whole economy of child's labour in English agriculture, as concerns its relations with the day-school:—

Ketteringham, 6th February, 1852.

My Dear Sir,—You may like to know if I can suggest any assistance to the desirable object on which you are speculating as to the mode of connecting the instruction of a parochial school with the practical learning of agricultural duties. There are, I think, few parishes where the children could be employed in gangs for half-time. Excepting at stone-picking and at seed-time, and in preparing mangold and turnips for winter stacking, when the school is altogether deserted, to earn a small sum upon which the parents systematically calculate, children are not required in any number together, or to go straight to one job where half the number could be relieved by the other half; and if they went singly, much time would be lost on the way, to the farmer or to the school, and confusion would arise in transmitting directions given by the farmer to one little urchin, who would have to leave them half executed, and convey his ideas to another, who would scarcely attend to his companion. I try the system partially on Sundays, when, to allow every boy to go to church once, I have one at divine service in the morning, who relieves the other at middle-day, that he may, in turn, attend evening service; but they are irregular, and occupy time (which farmers cannot afford) to watch them and keep *any* regularity *at all*. The plan I have adopted, and which I have hopes will succeed is, not to allow any child under twelve to be employed in my farms, and only those after twelve who have been to school up to that time. If properly trained up to that age, and properly taught reading, writing, &c., with the view always of opening the mind and improving the intelligence, rendering the child docile, obedient, civil, and somewhat self-controlling,

I believe he will be a valuable servant even at that early age of twelve, and yet be young enough to learn practically all the craft of his agricultural trade ere he becomes of size and strength to exercise it fully; while he will have so conquered the first and greatest difficulties of reading and writing, as to make it not improbable that he will willingly attend an evening school, to keep up his school-learning,—which will carry along with it also a continuance of the moral training—thus, as I hope, combining the constant progress of industrial, and moral, and intellectual improvement.

I have only time to add that I am,

Yours respectfully,
JOHN P. BOILEAU.

Convinced of the justice of these views, it was without surprise, that, a few weeks ago, I heard it asserted, in a company of men the best informed on the subject, that the English farm *day-schools* were generally "expensive failures;" a result diametrically opposed to all the sincere wishes and earnest endeavours of the speakers, and one which did not at all lower their admiration of the use made by Her Majesty, and by many of the English nobility and gentry, of the great influence of their respective positions, to maintain and improve industrial day-schools on their estates or in their neighbourhoods, for both male and female children, to revise, and correct, and elevate, the influences, even those connected with industry, of the poor man's home itself. The industrial department of the national schools at Finchley is the best study of the kind in the immediate vicinity of the metropolis; and its promoters believe that they have brought it into a self-supporting system.

With only present resources for our common day-schools, all systematic association of an industrial system with them thus appears to be hopeless, as also must be every attempt to make, by their agency, a direct application of the continental experience acquired in dealing with a very different class of children from that which frequents them. It is obvious, however, that the workshops of the continental farm-schools and their methods of moral training, their avoidance of overcrowding and their employment of ample moral force in proportion to the difficulties to be encountered, yield us invaluable lessons in the formation of *free industrial day-schools* in our large cities, for the neglected and morally-endangered children who are wandering in their streets; a duty which the ragged *day*-school is designed to discharge, if it have any distinct mission whatever, and be not merely an erroneous movement on the part of some of the devoted teachers of the ragged *Sunday* schools, whose labours are as devoted and surprising as they are beyond our present criticism.

This, however, is a branch of the subject on which I enjoy opportunities of dwelling elsewhere. By far the most important instruction which we can here educe from this experience of our continental neighbours, consists in its testimony to the vast advantage, both moral and economical, to be derived from employing, in spade-husbandry and household duties, the whole of the youthful population, whether pauper, morally-endangered, or actually delinquent, who are permanently thrown on society for support, in groups, or groups of groups, which may be governed as enlarged families, and maintained on this system of really moral and industrial education at as small a cost, at most, as that at which we now

tutor them in indolence and crime. And certainly it appears to me that the proper mode in which to realize this advantage is to begin at once by properly discharging the duties already devolving upon us in the proper management of the pauper children, for whom Colonel Jebb so justly claims a preventive discipline, to keep them out of the category of the criminal, of which they are at present the chief source.

If it really be not our design to bring them up for the hulks, or to weigh upon society in any other form of ignorant or intellectual, stolid or cunning, useless or criminal pauperism, but to form them into a hardy youth, accustomed to wrestle with the physical elements of nature for their bread, it is worthy of consideration, whether, by following the example of the Continent, we may not effect a saving in pauper palaces and a gain in the well-directed industry of the children themselves, to an amount which (if it were liberally expended in procuring the intelligent guidance, sound training, and hard-working example of some first-rate industrial schoolmasters) would prove the greatest economy that any board of guardians or poor-law commissioners ever effected. Labour must be the staple of the poor man's training. To live, is the first necessity. This is felt deeply enough by the children of the independent poor, and those of the dependent should surely not be less conscious of it. And in all the best continental institutions for these classes, therefore, labour on the land and industry in the workshop is the first desideratum; religious and moral training and example, realized in daily life, the next; and intellectual culture, though by no means dreaded, yet mainly used rather as a relief from other occupations than as the greatest feature of a pauper school. It will thus perhaps prove to have been a very happy obstinacy with which the English boards of guardians generally have declined all the invitations of the Commissioners to an adoption of the provisions of the 7th and 8th Victoria, c. 101, for the formation of school districts for the education of the children in large institutions, such as those formed or forming on the outskirts of London, Manchester, Liverpool, and Leeds, notwithstanding their many pleasing features.* But we shall find no excuse whatever for their not at least making a trial of the farm-school system of the Continent, since it has already been realized for them at home, by the judgment and zeal of W. Wolryche Whitmore, Esq., of Dudmaston Hall; in that of Quatt, situated on his property, and belonging to the Bridgnorth Union; and, for a "family" of female children only, by the enlightened affection of my friend Robert Weare Fox, Esq., in that belonging to the Falmouth Union, under the chairmanship of our Vice-President, Sir C. Lemon, Bart. M.P. The cost of the Quatt boys is 1*s.* 10½*d.* per week each for food, and 3½*d.* for clothing, and that of the Falmouth girls somewhat less; and these are rates which may be safely compared with those of the Continent.

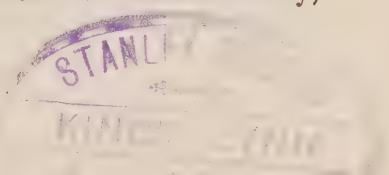
"An essential condition of success in agricultural, pauper, or reformatory schools, is the formation of an express body of masters for them, accustomed to country life and occupations, and at once humble and earnest. Our ordinary normal schools leave scarcely anything to be desired in the way of *teaching;* very able masters are constantly

* Third Annual Report of the present Poor Law Commissioners for 1850, p. 6.

being turned out by them; but their knowledge is too exclusively literary and scholastic; they will serve very well for the schools of the towns, but those of the country require other qualities of which they are generally deficient. In rural districts, we want men who, on quitting the platform of the school, know how to use the spade, the rake, the hoe, and the pruning-hook, and to train their pupils to the simplest practical labours of husbandry on the small scale, gardening, the management of trees, and the stalling of cattle. Such men, half teachers, and half labourers and gardeners, are to be found in several of the normal schools of Switzerland and Germany; and I have myself but recently returned from a study of their management at Hofwyl, near Berne, under the intelligent direction of M. de Fellenberg; at the same time that they are equally to be found at Kreutzlingen, near Constance, where Werhli animates them with his own spirit and leads them by his own example; at Bruggen, near Bâle, under the direction of M. Zeller; and at the Rauhen-Haus, near Hamburgh, under that of M. Wichern. In France, the institutions founded by MM. de Metz, Brétignères de Courteilles, Fissiaux, Rey, Bazin, Duclésieux, De Luc, &c., are organized with the like aim and on nearly the same bases; and in England, a similar character attaches in some respects to the normal schools of Battersea and Kneller Hall."*

The great difficulty will always be to find the proper persons to manage the workhouse children on the farm-school plan, so long as the children of our independent workmen and labourers, and, even yet more, those of the humbler classes immediately above them, are so ill-educated; and occupations so much more satisfactory than the boards of guardians seem likely to make the training of the pauper children, solicit each specially-trained teacher on every side, especially if he add industrial skill and habits of business to his intellectual qualifications. So far from suffering, at present, from over-education, or even over-instruction, we have not, nationally, enough of cultivated intellect, combined with practical skill and moral elevation, to meet the duties which devolve upon us; a conviction which I am the more ready to express, since my sincere anxiety for the *proper* education of the pauper child, as an example which must precede the proper reformation of the *criminal* child, might otherwise be mistaken for some jealousy of intellectual progress among any class of society, when, on the contrary, I believe that it can never be too great, so that it be sound, wholesome, and duly balanced. It appears to me to be, for these reasons, only the more important to make the position of the teacher and trainer of pauper children one of respect and comfort; and this would perhaps soon be brought about, if every facility and encouragement were given to the formation of farm-schools; for which a union of unions might sometimes be desirable, and which would always have a considerable permanent staff of children, to sustain and regulate the industry of those who will be dependent only for a shorter time.

* Report addressed to M. Tesch, Minister of Justice for the kingdom of Belgium, on Agricultural Colonies, Rural Schools, and Schools of Reform, by M. Edouard Ducpetiaux, Inspector-General of Prisons and Institutions of Public Charity, February, 1851.



When we have thus discharged our duty towards the large class of pauper children at present dependent on our bounty, by giving to their training a proper bias, instead of leading them on the highway to ruin, we may then, full of the first happy experiences of the result, ask the Legislature, with better grace, to indulge our philanthropic anxiety for the extension of the trust, by giving us a reformatory charge of the criminal, not merely for the term of their sentence, but for that of their minority; since, for want of the experience which our duty to the pauper children, if it had not been neglected, would have supplied, we have so grossly failed in the first national effort made to moralize this class, that on the first movement towards a more wholesome system, in 1850, parties of both senior and junior boys, at Parkhurst, fired their houses, and one of the largest was destroyed.* In fact, the best reformatory school, if the pauper school were what it ought to be, would be merely the best pauper school, with an unusual proportion of superintending moral agency, and some cells for solitary confinement, on occasions of necessity; besides full legal power to bring back and punish, within certain limits, those (and they would be few) who, under a wholesome discipline and such liabilities, would yet have the folly to abscond.

If, instead of adopting such a course, criminal children shall be made the subjects of true-hearted but rather showy experiments, or treated merely to book-knowledge on the one hand, and mechanical repression on the other, it will not be surprising that, as at Parkhurst, we should occasionally be "hoist by our own petard;" and that the young people should prove but bad subjects, even after they have gone through the regulation amount of hypocrisy, while their superior condition will only bring upon us new protests from Colonel Jebb, when the pauper boys are thus virtually taunted to show, at least, the spirit to commit a crime. As for the objection that industry is thus degraded by being associated with or made the staple of punishment, as I have heard it somewhat captiously argued, it might as well be said that the savage should be won to civilization by the example of idleness. The regulated industry of the honest and the civilized man, is regarded with equal dislike and contempt by the dishonest and the barbarous. While labour, therefore, is a terror and a disgrace to the vagrant, it affords satisfaction, if not pleasure, to one under proper influences, to whom it is as valuable as a discipline, as it is to the untamed wanderer of the streets as a warning.

Between the workhouse school on the one hand, and the public indifference, on the other, the efforts even of *private* charity in the direction of moral training by means of the farm-school have been very limited. The only institutions, not merely imitative, which have exhibited any completeness of principle, design, and execution, appear to have been those of the Children's Friend Society, being the Royal Victoria Asylum at Hackney Wick, conducted by Captain Brenton, and its female department at Chiswick, which enjoyed the advantage of superintendence by the Honourable Miss Murray, one of the Maids of Honour to the Queen; but this society fell, amidst the general apathy, before an

* Report of the Directors of Convict Prisons on the Discipline and Management of Parkhurst Prison, for the year 1850.

absurdly unjust cry of the press, on the occasion of the ill-treatment of one of the apprentices, sent out by it to the Cape of Good Hope. M. Ducpetiaux likewise mentions the school and colony of industry at Lindfield, in Sussex, formed by the late venerable William Allen, but now on the verge of being abandoned; as is also that at Ealing, so long supported by the Lady Noel Byron; while that of Lord Lovelace, at Ockham, is undergoing reconstruction. Neither does he omit from notice the school founded by the Rev. W. L. Rham, at Winkfield, near Windsor; the similar school at Batterbury, near Chelmsford; Mr. Smith's agricultural school, at Southam; Mr. Cropper's, near Liverpool; and that of Templemoyle, near Londonderry.

It will be plainly perceived that I do not think we are doing all that we ought for the pauper child in regard to his moral and industrial training; but I think it will be at least as obvious that I am not charging this as a fault upon the Government at large, or upon any special department of it, or even upon the local administration of the unions, some of whom, besides those already mentioned, are awakening to the true economy to be derived from an employment of vigorous moral influences for the dissipation of pauperism. I am charging the fault, if the fact must be called such, upon the state of opinion in this country generally; and, to correct it, I am advocating no legerdemain of authority, but merely that all parties responsible to society should, in this matter, recognise and act upon these truths:—

1. That the farm-schools of the Continent, applied to education for the prevention of crime, hold a social position precisely analogous to that of our own workhouse schools.

2. That for the children in these schools, as in those of the Continent, a training in vigorous rural industry, and close domestic economy, by means of farm-schools, conducted on the principles of a Christian family, will yield the greatest attainable moral vigour, with the least amount of indolence and self-deception.

3. That by far the greater number of the present workhouse schools are now producing converse results; and that we have no experience strongly favourable to regimenting and warding the children in large district palaces, however pleasing their mechanism, while we have ample testimony in favour of the farm-school system.

4. That the children at a proper farm-school, required to work steadily at all its outdoor and domestic duties, will not cost the public more than under the present system, or that of the contemplated district asylums; and will not cost so much, unless through a liberal employment of moral agency in their management, which will be a wise economy, in the ultimate result, and therefore far preferable to the expenditure of large sums in ornamental stone and brickwork.

5. That to have good *preventive* schools for the training of the pauper children, is the great practical step towards obtaining good *reformatory* schools for the re-training of criminal children, on principles well understood and economically applied.

It is, I hope, in no indifference to the case of the juvenile criminal, that I have thus glanced at the kindred trusts which devolve upon us, but merely to testify that a world-wide experience unites with that of

our own inspectors of prisons, in cautioning us against a vain effort to pursue the work of correction and reformation, without at least a corresponding amount of effort for the prevention of crime. So far from being disposed, for my own part, to fall into the opposite error, I propose to seek an early opportunity of laying before this Society some comparative statistics of the endeavours made in England, America, France, and Belgium, to employ the industrial farm-school in a vigorous system of correctional discipline, if I have not already trespassed too far upon its indulgence.

Statistics of the Juvenile Paupers and Criminals of England and Wales.

The facts already adduced will not only suffice to establish the conclusions which I have ventured to draw from them, but afford valuable hints for their practical application. The remainder of the data essential to such application, will be found in the following tables, describing the present numbers and treatment of the children and young persons in England and Wales, actually dependent on society, whether as paupers or criminals.

Number of Children and Young Persons, under 16 *Years of Age, in the Receipt of Parochial Relief in* 595 *Unions in England and Wales, on the* 1*st of January*, 1851.

Indoors:

Children of able-bodied inmates	Legitimate	10,350
	Illegitimate	7,470
Children of inmates not able-bodied	Legitimate	2,071
	Illegitimate	1,087
Orphans or other children relieved without parents		21,812
Total sane children and young persons indoors		42,790
Lunatic or idiot		238
Total children and young persons indoors		43,028
Total of all classes of inmates		105,359

Outdoors:

Children of adult males receiving temporary relief	78,356
Children of widows	123,413
Illegitimate children relieved with mothers	5,862
Children of parents in gaol	5,427
Children of soldiers, sailors, and mariners	1,124
Children in resident families of other non-resident males	8,538
Children of parents not able-bodied, relieved with parents	35,407
Orphans and others relieved without parents	17,230
Lunatic or idiot children	257
Total children and young persons outdoors	275,614
Total of all classes outdoors	726,071
Total of all classes relieved	831,430

The average cost of each indoor pauper is somewhat more than 2*s*. per week.

Workhouse Teachers.

At the same date, the whole 634 unions employed 383 schoolmasters, whose total salaries amounted to 11,837*l.*, being at the rate of 31*l.* each per annum; 501 female teachers, at the cost of 10,493*l.*, being, on the average, 21*l.* each; sums which represent, perhaps, fairly the accustomed standard heretofore for the educators of pauper children. Out of the special grant recently made by Parliament to raise the status of this class of teachers, 20,004*l.* was distributed among them in the year 1850-51; but this was for the most part in mere supersedence of the sums already paid by the guardians, and not not in addition to them. Some of the unions employed also superintendents of labour, to the total number of 69, receiving about 40*l.* a-year each, or 2,723*l.* in the whole. The board and lodging of both teachers and superintendents may be valued at 15*l.* per annum more, being generally comfortable.

The daily average number of prisoners in all the gaols of England and Wales, in the year 1849, was—

Males	15,300
Females	2,988
Total	18,298

The total expenditure of all the prisons was 433,701*l.* 15*s.* 10$\frac{3}{4}$*d.*, giving an average cost of 23*l.* 14*s.* 3$\frac{3}{4}$*d.* per head per annum, or 1*s.* 3$\frac{1}{2}$*d.* per day. The average earnings of each prisoner were, however, 1*l.* 5*s.* 1$\frac{1}{2}$*d.* per annum; and exclusive of repairs, alterations, and additions, the average cost would be 21*l.* 1*s.* 9$\frac{1}{4}$*d.* per head per annum, or 1*s.* 1$\frac{3}{4}$*d.* per head per day. If the earnings were deducted, the average cost per head would be just under 20*l.* per annum, or 1*s.* 1*d.* per day. The earnings thus deducted consist of 9,906*l.* 13*s.* 1$\frac{1}{4}$*d.* for net profit on manufacturing or other work, and 13,064*l.* 1*s.* 5*d.* estimated profit of work done for the benefit of the county, city, or borough; in all, 22,970*l.* 14*s.* 6$\frac{1}{4}$*d.*

Total Number of Juvenile Prisoners Committed for Trial or Tried at Assizes and Sessions, or Bailed, in England and Wales, in the course of the Year 1849.

	Males.	Females.	Total.
For trial at the commencement of the year	187	22	209
Committed for trial in the course of the year	1,886	375	2,261
Received from custody of other Governors for trial in the course of the year	222	36	258
Total of each sex	2,295	433	2,728
Total of both sexes and all ages			30,849

Results of the Proceedings.

	Males.	Females.	Total.
Convicted	1,916	341	2,257
Acquitted at the bar	240	72	312
No bills found	89	18	107
Not prosecuted	6	5	11
Died before trial	1	....	1
Admitted evidence on the part of the Crown	5	5	10
Bailed to appear to take their trial at a subsequent tribunal	4	....	4
Non-appearance to recognizances	2	....	2
Left for trial at end of year	160	31	191
Total of each sex	2,423	472	2,895
Total of both sexes and all ages			30,849

Total Number of Juvenile Prisoners under Summary Convictions in England and Wales in the course of the Year 1849.

	Males.	Females.	Total.
Under the Game Laws	182	1	183
,, Revenue Laws	18	3	21
,, Vagrant Act	2,259	590	2,849
,, Malicious Trespass Act	540	108	648
,, Larceny Act	465	79	544
,, Poor Law Act	332	98	430
,, Juvenile Offenders' Act	1,544	96	1,640
,, Metropolitan or Local Police Acts	415	71	486
For assaults	500	70	570
For want of sureties	73	21	94
As known or reputed thieves	1,161	155	1,316
On summary convictions not included in the preceding classes	1,296	174	1,470
Deserters waiting a route	2	....	2
Total of both sexes	8,787	1,466	10,353
Total of both sexes and all ages			92,074

Movement of the Juvenile Prison-Population in the Year 1849.

	Males.	Females.	Total.
In custody at the commencement of the year	1,238	206	1,444
Received under commitments	10,431	1,822	12,253
Received from other Governors and enumerated in their returns	833	136	969
Transports received under contract with Government	6	....	6
Transferred to other Governors before trial or conviction	632	88	720
Committed for examination, but afterwards discharged	1,429	305	1,734
Total of both sexes	14,569	2,557	17,126
Total of both sexes and all ages			157,273

Ages of the Juvenile Prisoners in the Gaols of England and Wales in the course of the Year 1849.

Prisoners in the Gaols of England and Wales.	Under 12 Years of Age.		12 Years and under 14 Years.		14 Years and under 17 Years.		Total.	
	Males.	Fem.	Males.	Fem.	Males.	Females	Males.	Females
Prisoners for trial, or tried at assizes and sessions	114	25	308	49	1,841	367	2,263	441
Prisoners under summary convictions	1,141	151	2,239	316	5,405	999	8,787	1,466
Total of each sex	1,255	176	2,547	365	7,246	1,366	11,050	1,907
Total of both sexes	1,431		2,912		8,612		12,957	

State of Instruction among the Juvenile Prisoners in the Gaols of England and Wales in the course of the Year 1849.

State of Instruction.	By Assizes and Sessions.		By Summary Convictions.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.
Can neither read nor write	848	195	4,063	868	4,911	1,063
Can read only	540	143	1,798	375	2,338	518
Can read or write, or both imperfectly	802	94	2,704	214	3,506	308
Can read and write well	73	9	194	8	267	17
State of instruction not ascertained	....	....	28	1	28	1
Total of each sex	2,263	441	8,787	1,466	11,050	1,907
Total of both sexes	2,704		10,153		12,957	

Terms of Imprisonment, before Trial, of the Total Number of Juvenile Prisoners, at Assizes and Quarter Sessions, in England and Wales, in the course of the Year 1849.

Terms.	Males.	Females.	Total.
Under 14 days	884	162	1,046
14 days and under 1 month	474	109	583
1 month and under 2 months	524	96	620
2 months and under 3 months	183	27	210
3 months and under 6 months	59	7	66
6 months and upwards	11	1	12
Total	2,135	402	2,537
Solitary confinement	203	41	....

Total of both sexes..... 244

Terms of Imprisonment of the Total Number of Juvenile Prisoners, after Trial at Assizes and Quarter Sessions, in England and Wales, in the course of the Year 1849.

Terms.	Males.	Females.	Total.
Under 14 days	168	32	200
14 days and under 1 month	182	59	241
1 month and under 2 months	319	65	384
2 months and under 3 months	287	40	327
3 months and under 6 months	386	84	470
6 months and under 1 year	271	35	306
1 year and under 2 years	55	9	64
2 years and under 3 years	7	2	9
3 years and upwards	2	1	3
Whipped, fined, or discharged on sureties	25	2	27
Sentence deferred	.. .	1	1
Total	1,702	330	2,032

The number sentenced by courts to be whipped was, publicly 4, and privately 1852; in all 1,856.

Total Number of Juvenile Prisoners sentenced to Transportation at Assizes and Quarter Sessions, in England and Wales, in 1849.

Terms.	Males.	Females.	Total.
For 7 and under 10 years	145	9	154
,, 10 and under 15 years	61	1	62
,, 15 and under 20 years	4	1	5
,, 20 years and upwards	1	....	1
,, Life	3	....	3
Total	214	11	225

Total of both sexes and all ages..... 3,099

Terms of Imprisonment of the Total Number of Prisoners under Summary Conviction, in England and Wales, in the course of the Year 1849.

Terms.	Males.	Females.	Total.
Under 14 days	2,500	526	3,026
14 days and under 1 month	2,777	529	5,306
1 month and under 2 months	2,978	271	3,249
2 months and under 3 months	769	85	854
3 months and under 6 months	630	52	682
6 months and under 1 year	25	2	27
1 year and under 2 years	2	....	2
Unlimited terms	2	1	3
Whipped, fined, or discharged on sureties	4	....	4
Total	0,687	1,466	11,153

Total Number of Recommittals *of Juvenile Prisoners in the Gaols of England and Wales in the course of the Year* 1849.

Recommittals.	Males.	Females.	Total.
Once	1,866	259	2,125
Twice	821	123	944
Thrice	423	61	484
Four or more times	670	91	761
Total	3,780	534	4,314

Punishments for Offences in Prison, *inflicted on Juvenile Prisoners in the Gaols of England and Wales, in the course of the Year* 1849.

Punishment.	Males.	Females.	Total.
Handcuffs and other irons	18	5	23
Whipping	85	....	85
Dark cells	1,627	135	1,762
Solitary cells	2,418	311	2,629
Stoppage of diet	12,770	581	13,351
Other punishments	280	38	318
Total	17,198	968	18,168

Mode in which the Total Number of Juvenile Offenders confined in the Gaols of England and Wales were employed in the course of the Year 1849.

Mode.	Males.	Females.	Total.
Hard labour	8,687	1,419	10,106
Employment, not hard labour	2,673	574	3,247
Not employed	3,163	560	3,723
Employment not ascertained	46	4	50
Total	14,569	2,557	17,126

Health of the Juvenile Prisoners confined in the Gaols of England and Wales in the course of the Year 1849.

Health.	Males.	Females.	Total.
Slight indisposition	2,752	358	3,110
Infirmary cases	319	93	412
Criminal lunatics	2	1	3
Pardons on medical grounds	5	....	5
Deaths	15	....	15
Total	3,093	452	3,545
Greatest number of sick at any one time	133	25	158

*** The discrepancies observable in a few of the preceding statements occur in the gross returns from which they are abstracted, being the latest which have been published in the Reports of the Inspectors of Prisons.

History of Coffee.—By John Crawford, Esq.

[Read before the Statistical Society of London, 19th January, 1852.]

Coffee, the *Coffea arabica* of botanists, belongs to the same natural order of plants as the different species of Peruvian bark, viz., the Rubiaceæ. Its ordinary appearance much resembles that of a Portugal laurel; its flowers, both as to shape and fragrance, the jasmine; and its fruit, small wild cherries. The trees in a plantation, in order to afford nourishment, light, and air, must be planted not nearer to each other than nine feet. The plant yields fruit at two years old, is in full bearing at four, and its cultivation is worth continuing until it reaches the age of twenty. When it comes into full bearing, its height is about eight or ten feet, but it will live to attain that of twenty. A coffee-plantation in full flower has much the appearance of a grove of evergreens in a temperate climate, on which has fallen a pretty heavy snow shower, superadding heat and fragrance.

There are about a dozen species of the genus to which coffee belongs, some African, some Indian, some American, and some Polynesian, but all of them inhabitants of countries within and immediately about the Tropics. One species alone, the Coffea arabica, is cultivated, or at least largely so, and yields the important commercial article. Within the limits described, coffee is a very hardy plant, and seems readily to yield fruit in any tolerably rich soil, over every part of a zone of at least forty degrees around the globe. Its favourite locality, however, is hill-sides, at an elevation of from 1000 to 3000 feet above the level of the sea, and hence its wide diffusion, its extensive cultivation, and large consumption. As an object of cultivation, it takes the place, within the Tropics, in relation to other objects of culture, that the vine does in the South of Europe, or tea in China.

In comparison with the production of sugar and spirits from the cane, which partakes at least as much of the character of manufacture as of agriculture, that of coffee is a simple process, which may be carried on by small capitalists, and in some localities, from the temperance of the climate, even by European capitalists. The tea of China, of which the production is so immense, is certainly all so produced. Even coffee itself is so produced by the small negro proprietors of Hayti, by the inhabitants of several parts of Sumatra, and by those of Celebes.

Coffee, although taking its name from Arabia, is not a native plant of that country, but of Abyssinia, where it is found both in the wild and cultivated state. From that country it was brought to Arabia, in comparatively very recent times. Mr. Lane states that it was first used there about the year 1450. It was not known to the Arabs, therefore, for more than eight hundred years after the time of Mahomed, and was introduced only between forty and fifty years before the discovery of America. The Arabians called coffee kăhwăh, which is an old word in their language for wine. The unlucky word gave rise to a dispute about the legality of its use among the Mahomedan doctors, who, mistaking the word for the thing it represented, denounced as a narcotic that which was anti-narcotic. They were beaten, and coffee has ever since become a legitimate and favourite

potable of the Arabs. In a century, its use spread to Egypt and other parts of the Turkish empire.

For two centuries from its introduction into Arabia, the use of coffee seems to have been confined to the Mahomedan nations of Western Asia; and, considering its rapid spread and popularity among the European nations, it is remarkable that it has not, like tobacco, extended to the Hindus, the Hindu-Chinese, the Chinese, the Japanese, or the tribes of the Indian Archipelago, who no more use it than Europeans do the betel preparation. The high price of coffee, and the low cost of tobacco, most likely afford the true solution of the difference. One striking result of the use of coffee first, and then of tobacco, among the Mahomedan nations, is well deserving of notice. These commodities have been, in a great measure, substituted for wine and spirits, which had been largely, although clandestinely, used before, and hence a great improvement in the sobriety of Arabs, Persians, and Turks. I give this interesting fact on the authority of Mr. Lane, who mentions it in his notes to his translation of the Arabian Nights.

From Turkey, coffee found its way to Europe. A Turkey merchant of London, of the name of Edwards, brought the first bag of coffee to England, and his Greek servant made the first dish of English coffee. This was in 1652, under the Commonwealth. But for half a century, at least, Arabia furnished all that Europe consumed, which, therefore, must have been very trifling. It was, in fact, long the luxury of a few fashionable people, with whom, however, it must have been in general use sixty years after its introduction, as we find from the well-known passage of the "Rape of the Lock," published in 1712, in which politicians are described as seeing through it "with half-shut eyes."

Le Grand d'Aussy, in his "Vie Privée des Français," gives a curious and interesting account of the first introduction of the use of coffee in France. As early as 1658 some merchants of Marseilles introduced the use of coffee into that city, and Thévenot, after his return from his eastern travels, about the year 1658, regaled his guests with coffee after dinner. "This, however," says Le Grand, "was but the eccentricity of a traveller, which would not come into fashion among such a people as the Parisians. To bring coffee into credit, some extraordinary and striking circumstance was necessary. This circumstance occurred on the arrival, in 1669, of an embassy from the Grand Seigneur Mahomet IV. to Louis XIV. Soliman Aga, chief of the mission, having passed six months in the capital, and during his stay having acquired the friendship of the Parisians by some traits of wit and gallantry, several persons of distinction, chiefly women, had the curiosity to visit him at his house. The manner in which he received them not only inspired a wish to renew the visit, but induced others to follow their example. He caused coffee to be served to his guests according to the custom of his country; for since fashion had introduced the custom of serving this beverage among the Turks, civility demanded that it should be offered to visitors, as well as that these should not decline partaking of it. If a Frenchman, in a similar case, to please the ladies, had presented to them his black and bitter liquor, he would be rendered for ever ridiculous. But the beverage was served by a Turk—a gallant Turk—and this was sufficient to give it inestimable value. Besides, before the palate could judge, the eyes were seduced by the

display of elegance and neatness which accompanied it,—by those brilliant porcelain cups into which it was poured,—by napkins with gold fringes on which it was served to the ladies; add to this the furniture, the dresses, and the foreign customs, the strangeness of addressing the host through an interpreter,—being seated on the ground on tiles, &c., and you will allow that there was more than enough to turn the heads of French women. Leaving the hotel of the ambassador with an enthusiasm easily imagined, they hastened to their acquaintances to speak of the coffee of which they had partaken; and heaven only knows to what a degree they were excited (exaltés)."

The extravagant price of coffee, notwithstanding that the fashion of drinking it was established, prevented it from coming into use. It was only to be had, according to Le Grand, at Marseilles, and even there not in any quantity. Labat, quoted by him, states that the price, at this time, was the enormous one of forty crowns a pound. In 1672 an Armenian of the name of Pascal opened, in Paris, the first coffee-house on the plan of those he had seen at Constantinople. Pascal was followed by a crowd of imitators, whose numbers became so great, in 1676, that it was found necessary to form them into a society by statute.

As to the European names of coffee, they are all from the same source; the old Arabic word for wine, kăhwăh, which is composed of a very guttural K, unpronounceable by Europeans, except by an awkward effort, of the labial W and of two short vowels ă, with an aspirate at the end of each syllable. The Turks have changed the labial W into V; and the European nations who took the word directly from them have corrupted the word by converting the labial V into the labial F, by substituting an ordinary K or hard C for the Arabic guttural,—by omitting both the aspirates, and by converting the last short ă into ĕ, or, as with ourselves, always the greatest corrupters of orthography, changing both the vowels.

The history of the cultivation of coffee by European nations in their colonies is singular. The old Dutch East India Company carried on some traffic with the Arabian ports on the Red Sea; and about the year 1690, the Dutch Governor-General of India, Van Hoorne, caused some ripe coffee-seeds to be brought to Java: they were planted, grew, and produced fruit. He sent a single plant home from Batavia to Nicholas Witsen, the Governor of the East India Company, which arrived safe, was planted in the Botanic Garden of Amsterdam, where it prospered, produced fruit, and the fruit young plants. From the Amsterdam garden, plants were sent to the Dutch colony of Surinam, and the planters entered on the cultivation of coffee in 1718, or 133 years ago. The authority for this is the celebrated physician and botanist Boerhaave, in his Index of the Leyden Garden. In ten years after its cultivation in Surinam, it was introduced from that colony by the English into Jamaica, and by the French into Martinique. The first coffee-plant cultivated in Brazil, now the greatest producing country in the world, was reared by a Franciscan monk, of the name of Vellosa, in the garden of the convent of St. Antonio, near Rio Janeiro: it throve, and the monk presented its ripe fruit to the Viceroy Lavrado. He, judiciously, distributed it to the planters, who commenced the cultivation in 1774, only 77 years ago.

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It was about 1690, as already stated, that the coffee-plant was first introduced into Java. From thence it was conveyed to Sumatra, to Celebes, to the Philippines, and, in our own times, to Malabar, Mysore, and Ceylon. The few coffee-berries brought from Mocha to Batavia are the parents of the vast quantity now produced; and all the coffee that is consumed, save the trifle yielded by Arabia, has the same origin. The success of the cultivation of coffee in the colonies of European nations is a striking contrast to the substantial failure which has taken place in the culture of the vine and the tea-plant, and proves the facility with which coffee can be raised, and the difficulty of producing both wine and tea. Even the Indians of Sumatra and Celebes, without any help from Europeans, have produced very good coffee; but to produce good wine or good tea, even if the climate of these islands were suitable, would perhaps be as much beyond their skill, as to produce a steam-engine or a time-keeper.

Attempts have been made to estimate the quantity of coffee produced in every part of the world at the present time, and the following has been considered probable, which is the utmost that can be said of this or of any similar estimate:—

	lbs.
Brazil	176,000,000
Java	124,000,000
Cuba and Porto Rico	30,000,000
St. Domingo	35,000,000
Laguira	35,000,000
Costa Rica	9,000,000
British West Indies	8,000,000
Ceylon	40,000,000
Malabar and Mysore	5,000,000
French and Dutch West Indies	2,000,000
The Philippines	3,000,000
Sumatra	5,000,000
Celebes	1,000,000
Arabia	3,000,000
	476,000,000

Estimating the value of this quantity in Europe at 50*s.* a cwt., it will exceed 10,000,000*l.* Supposing the tax imposed on coffee, on an average, not to exceed our own, now the moderate one of 3*d.* a pound, and that no more than 300,000,000 of pounds are subject to it, the revenue which this article yields to different European governments will be 3,700,000*l.* The prime cost to the consumer, therefore, will be 13,700,000*l.*; but to this must be added expense of transport from emporia, with the wholesale and retail profits of intermediate dealers; and, with this addition, the actual sum paid by the consumers of coffee will not, I think, be over-estimated at 20,000,000*l.* a year. Supposing the whole quantity of 476,000,000 of pounds to be exported by sea, its conveyance would require 214,289 tons of shipping, without including transhipment, which is frequent. Taking the freight of coffee at 2*l.* 10*s.* per ton for voyages, which are seldom under six weeks, and in some cases extend to double and treble that time, it will amount to above 530,000*l.* I give these estimates only for the purpose of showing the importance of a branch of industry which has been the creation of little more than 130 years; for Arabia, which had furnished the

whole supply before that time, now yields, according to the estimate, very little more than the *one hundred and sixtieth part of it,* yet it probably produces now as much as ever it did.

With respect to the relative quantities of coffee consumed in different countries, this is, of course, a matter which must depend upon the wealth of their inhabitants, their taste, and the preference, or otherwise, which, by custom, they may have for this stimulant over others of the same class. A few examples may be given. In Denmark, including the duchies, the consumption of coffee, on the average of the four years ending with 1847, was 12,337,281 lbs., and the population being 2,296,496, the rate per head was 5·37 lbs. On comparing the first two years of this statement with the two last, there is a very trifling increase in the latter, but the consumption may be considered, within so short a period, as nearly stationary. Chicoree is largely used in Denmark to mix with coffee; and in 1847, the quantity given in the return amounted to 3,047,558 lbs., which approaches to near a fourth part of the coffee consumed in the same year.

The consumption of all the countries comprehended in the German Union, for the five years ending 1848, was 95,531,577 lbs., and the population being 29,392,524, the consumption of each person was only 3·25 lbs. There was here an increase of consumption, on a comparison of the two last with the two first years of the statement, of 8·24 per cent. But there is a wide difference in the rate of consumption in the different countries composing the Union. Saxony, with a population of 1,836,433, consumes 6,010,400 lbs., or at the rate of 3·33 lbs. a head; whereas Bavaria, with 4,520,751 inhabitants, consumes only 516,355 lbs., or 1·12 lbs. a head. It is to be observed, that in all the countries under the German Union, what are called substitutes for coffee (generally, it may be presumed, chicoree) are included in the quantity consumed.

On the average of five years ending with 1848, the consumption of Prussia in coffee was 59,649,920 lbs., and the population being 16,597,282, the average per head was 3·58 lbs., being, as might be expected, the largest of any country under the German Union. Comparing the two first with the two last years, there had been an augmentation in the consumption of 6·81 per cent.

The quantity of coffee yearly consumed in Belgium, on the average of the four years ending 1848, was 39,608,938 lbs.; and as the population was 4,337,196, the consumption of each person averaged 8·92 lbs. Comparing the two last with the two first years, the increase of consumption was no less than 39½ per cent. No mention is made in the tables of chicoree, probably because a domestic product, and untaxed, but it is understood to be largely consumed.

Our own consumption of coffee in 1850 was 31,226,840 lbs., and the population of Great Britain and Ireland being 27,452,261, the consumption per head was 1·13. It had rapidly risen down to 1847, but has since been declining, from causes not very obvious. The heavy duties imposed down to 1825, were the cause, no doubt, of the low consumption down to that year. They had, before then, been, on colonial coffee, 1*s.*, on British Indian, 1*s.* 6*d.*, and on foreign, 2*s.* 6*d.*, the last virtually prohibitory. With such duties, the consumption in 1824 was 8,202,943 lbs. Next year, the three different kinds of duty

were respectively reduced to 6*d.*, 9*d.*, and 1*s.* 3*d.*, and the consumption rose at once 11,082,970 lbs., and continued to rise until 1847. In 1846, the duty was reduced to 4*d.* a pound on all British, and to 6*d.* on all foreign. Next year, the consumption attained its maximum, viz., 37,441,373 lbs., from which, down to 1850, there had been a fall, 6,214,503 lbs. Last year, however, the duty on all coffee having been reduced to 3*d.* a pound, there has been an increase over the consumption of 1850 of 1,337,324 lbs.

The defalcation in the consumption since 1847 has been charged to what has been called the substitution of chicoree for coffee. Chicoree, however, is not a substitute for coffee, for it cannot be used alone, and, indeed, in no way without coffee. It seems to be only a cheap diluent, and the effect of its use ought to be, not to displace, but to extend the consumption of coffee, by rendering it more accessible to the poorer classes of consumers.

In Denmark, Germany, and Belgium, chicoree is used, probably to a greater degree than among ourselves, but in none of these has a falling-off in the consumption taken place. On the contrary, there has been, even in Denmark, a small advance, and in Belgium a very large one, and this within the very period in which our consumption has declined. I suspect the true solution will be found in the preference given to tea by the taste of the people of this country. While the consumption of coffee has declined, that of tea has constantly advanced since 1847. In that year, the quantity consumed was 46,314,821 lbs., and in 1851 it was 53,965,112 lbs., an increase of between seven and eight millions. It is certain that the respective duties on tea and coffee have had no part in promoting the consumption of the first, or in discouraging that of the last. They ought, as they have borne on the two articles, to have had the opposite effect. A hundred weight of coffee, worth 56*s.*, pays a duty of no more than 28*s.*, or 50 per cent. ad-valorem, whereas a hundred-weight of tea, at 1*s.* a pound, pays 265*s.*, or 236 per cent. on the value, which is between four and five times as much. Tea, in fact, has always virtually paid a higher duty, in this country, than coffee, and yet has, notwithstanding, advanced more rapidly in consumption. Thus, tea, intrinsically worth 1*s.* a pound, was sold at the public sales of the East India Company at 2*s.*, and a tax on this monopoly price of 2*s.* was imposed by the State, which made the virtual tax paid by the consumer 200 per cent. Coffee, worth at the same time 56*s.* a cwt., paid only 112*s.*, or 200 per cent., being one-third less. Yet, while coffee was favoured by the lighter duty, and tea burthened by the heavier, the consumption of the first little exceeded, in 1824, 8,000,000 lbs., while that of the latter exceeded 20,000,000 lbs., the disparity being really far greater, when it is considered that, in use, one pound of tea is equal to three of coffee. This preference has been further enhanced by a fall in the price of tea, since that year, more than commensurate with that which has taken place, in the same time, in that of coffee.

The relative consumption of tea and coffee in the United States of America, and in the United Kingdom, will assist us in understanding what the proportions of the two commodities would be, if England and America, in point of general taxation, were placed under the same circumstances. Neither of these commodities pays a duty in America, and,

generally, the population of the two countries has the same tastes. We must take the consumption of America to be the same as the importation, after deducting re-exportation. The importation of coffee in 1850 was 145,272,687 lbs., and the re-exportation having been 15,381,758 lbs., there remained for consumption 129,890,929 lbs. The population in the same year being 23,300,000, the rate of consumption per head was 5·57 lbs. It follows from this, that the proportion of coffee consumed in America is as five to one of that consumed in the United Kingdom.

The tea imported into the American Union in 1850 was 29,872,654 lbs., and the re-exportation being 1,673,053 lbs., there remained for consumption 28,199,601 lbs. The quantity of coffee, therefore, consumed in America, is above four times that of tea, while with us, the consumption of coffee is only as 60 to 100.

The tea and coffee together consumed in the United States in 1850 amounted to 157,090,530 lbs., which gives 6·74 lbs. for the consumption per head. With ourselves, the joint consumption of the two articles for the same year was 82,404,055 lbs., which was at the rate of 3·0 lbs. only, or less than one-half the American consumption. This, however, is not, perhaps, the fair way of considering the relative consumption of the two nations, either as to use or value. A pound of tea is, on an average of all teas, equal in value to two pounds of coffee, and in use to three. In reference to use alone, then, the tea consumed by both parties should be multiplied by three, and on this estimate the consumption of the two stimulants by the Americans will be 9·20 lbs. per head, and of the British 6·70. Even on this hypothesis, the American consumption is greater than our own by 38 per cent. The reasons are obvious enough. The mass of consumers is in easier circumstances in America than in the United Kingdom, and besides this, they have their tea and coffee cheaper than we have, not only by the duty, which is near 6,300,000*l.*, but also by the profits which must be paid on that duty by those who advance it to the State.

It can hardly be denied but that the consumption of tea and coffee, and I will add to them another stimulant, of which the effects are, to a considerable extent, of the same nature, tobacco, have contributed materially to the sobriety, decency, and even morality, of the inhabitants of this country. They all stimulate the nervous system, without producing intoxication, and it is difficult to commit an excess in them. The change in manners effected by them, whatever its extent, has been the work of about two centuries and a half, for before that time every stimulant of popular use had been intoxicating. The actual price paid by the consumer for the three articles in question cannot, I think, be estimated at less than 25,000,000*l.* a year, viz., 12,000,000*l.* for tea, 3,000,000*l.* for coffee, and 10,000,000*l.* for tobacco. Had this enormous sum, chiefly contributed by the middle and working classes, not been expended in these commodities, it must have been so in the intoxicating potables used by our ancestors. It is true that tea, coffee, and tobacco, have not displaced ale and spirits, but it is certain, also, that they have, to a large extent, been substituted for them.

In corroboration of what is here stated, it deserves to be noticed that the introduction of two of the commodities mentioned, coffee and tobacco, have conduced to the promotion of sobriety among the Mahomedan nations of Western Asia. My authority for this is

Mr. Lane, to whom I have already alluded, who states the fact in his learned and judicious notes to his translation of the Arabian Nights. "I judge," says he, "from the conversation and writings of Arabs, which justify me in asserting that the practice of drinking wine in private, and by select parties, is far from being uncommon among modern Muslims, though certainly more so than it was before the introduction of tobacco into the East, in the beginning of the 17th century of our era; for this herb, being in a slight degree exhilarating, and at the same time soothing, and unattended by the injurious effects that result from wine, is a sufficient luxury to many who, without it, would have recourse to intoxicating beverages, merely to pass away hours of idleness. The use of coffee, too, which became common in Egypt, Syria, and other countries, besides Arabia, a century earlier than tobacco, doubtless tended to render the habit of drinking wine less general. That it was adopted as a substitute for wine, appears even from its name."—Lane's Arabian Nights, vol. i., p. 215.

If the commodities which I have named really conduce to the sobriety, and, consequently, to the morality of the people, it becomes the duty of the legislature to encourage their consumption in the only way in which it can legitimately do so—by the imposition of moderate and equable duties. Coffee, at the present rate of duty, is fairly enough assessed, but the tea-duties are at once excessive and unequal, and the tax on tobacco is such, that this article has become one of the chief objects of the contraband trade.

It remains only that I should name the authorities from which I have derived some of the principal facts given in this paper. The consumption of the nations of the Continent, is taken from the elaborate and instructive statements relating to foreign countries contained in the Tables of Revenue, Population, and Commerce, published by the Board of Trade. The consumption of the United States of America I owe to the kindness of the American Legation. The statements of the coffee-produce of all countries is, to a great extent, taken from the elaborate letter of an American merchant residing at Rio de Janeiro, which appeared in a New York journal. It was this very able letter which immediately drew my attention to the subject, and induced me to write upon it. The statement of the produce of the East has been corrected from the official returns of the Dutch and English Governments, or from those of merchants. From their nature all these statements must be looked on on as little better than approximations. Taken chiefly from the quantities exported, they, of course, do not include the consumption of the producing countries, which, however, in so far as the East is concerned, is not considerable.

Note by Dr. Beke.—In the course of the year 1850, I wrote to my friend Dr. H. L. Fleischer, Professor of the Oriental Languages in the University of Leipzig, respecting the derivation of the word *coffee*. The following is a translation of his answer on the subject, dated October 18, 1850:—

"The Arabs still possess the word بُنّ as well as قَهوة, but they employ the former solely to designate the coffee-berry. Berggrén, in his Guide Français-Arabe-vulgaire (Upsala, 1844), has the following under the word *Café*:—

'*Café*, en grain, بن بنونات *bounn*, pl. *bounounât;*

„ en grain brûlé, بن محمص *bounn mou'hammas;*

„ en poudre, مسحوق, بن مسحون *bounn mas'houn*, ou *mas'houq;*

„ liqueur, قهوة *qàhwé.*

'Le mot Arabe *qàhwé* désignait originairement une espèce de vin doux et léger [it is still used in this sense by Arabian poets], et il ne fût donné à la décoction du *bounn* que vers la fin du 13me ou, selon d'autres, du 15me siècle, époques auxquelles on rapporte la première invention de cette boisson dans le Yemen.'

"The chief authority for the history of coffee is the 'Treatise on Coffee' contained in De Sacy's *Chrestomathie Arabe*, 2nd edit. vol. i. pp. 412-483; to which may be added what I have cited in Naumann's *Catalogus Libb. MSS. Bibl. Sen. Lipsiæ*, p. 512, from a Persian Treatise on Coffee."

When writing to Professor Fleischer, I had referred him to the native names of coffee in the languages of Abessinia and the neighbouring countries, which are given in my Vocabularies, printed in the second volume of the Proceedings of the Philological Society of London, p. 101. These names it will not be uninteresting to re-produce here. They are as follows:—

Kaffa	*bunno*	Agau of Agaumider	*bunnoa*
Woratta	*bunna*	Gafat	*bunshen*
Wolaitsa	*bunna*	Amharic*	*bunn*
Gonga	*bunno*	„ of Shoa	*bunna*

In the Amharic and Tigre languages of Abessinia, the name given to the decoction of the roasted berry is *kahwa*. But, as the beverage is common among the Mohammedans alone, it being deemed unlawful by the Christian Abessinians; and as the Mohammedans of Africa, and indeed of all other parts of the world, affect the Arabic language from religious pride and as a means of distinguishing themselves from the surrounding "infidels;" it is not to be doubted that the word *kahwa*, as thus used by the Mohammedan Abessinians, is merely the Arabic قهوة.

In M. Tutschek's "Dictionary of the Galla Language," the name given to the tree and berry is *buna*, while the decoction is said to be called *qa'wa* or *ca'wa*, which is merely the Arabic, as before. But among the pagan Gallas of Guderu and other districts south of Abessinia Proper, I found the word *boka* used to designate the decoction, as well as the tree and berry; this being the sole variation which I met with among the languages of Abessinia and the adjacent countries from the uniform use of *bunn*, or some closely similar word, to signify *coffee*. And, as the coffee-tree grows wild and is indigenous in most, if not all, of those countries, it is manifest that the Arabic designation of the berry (*bunn*) was derived from the native East-African name, and was introduced into Arabia from Africa together with the coffee itself. C. B.

* See Isenberg's "Dictionary of the Amharic Language."

Taxation and Revenue of the Free City of Frankfort-on-the-Maine.

By Lieut.-Colonel W. H. Sykes, F.R.S.

[Read before the Statistical Society of London, 19th January, 1852.]

The Society may recollect that in a paper of mine in the seventh volume of the *Statistical Journal*, for December, 1844, respecting the Statistics of Frankfort, the following passage occurs:—

"I wish I could state anything specific respecting the finances of Frankfort; but, considering that it calls itself a Free City, that it has a semblance of a representative system in its administration, I must say that a secrecy is preserved with respect to the details, and even the amount of its income and expenditure, which is very discreditable to the governing body. No doubt the members of the Lower Chamber could personally inspect the books of income, but not take copies or extracts; and one of them could only state to me from memory some of the amounts of the larger branches of income; but with respect to the expenditure, I was told that it was 'a mystery.'" My sharp comments upon this system got into some of the German papers, and excited attention. A copy of one of these papers was sent to me at the time, and, to my surprise and amusement, during last year, the eighteenth number of the Frankfürter Newspaper, for Monday, the 14th May, 1849, was transmitted anonymously. It contained the first public budget of the Frankfort finances, and the editor, in his preface to the budget, uses the following language, which our Assistant-Secretary, Mr. Brown, has been good enough to translate:—

"To obtain an insight into this hitherto mysterious state-secret is no longer denied us.

"Why the second half of the budget has been hitherto withheld from the citizens of Frankfort (when the expenditure has been communicated to them for some years) is indeed quite unintelligible. Through this concealment, we have rendered ourselves truly ridiculous both at home and abroad; for whilst, throughout the whole of Germany, publicity in this matter has been even courted, we *alone* have retained the pigtail, and should, without doubt, have done so still longer, had not the revenue accounts (so often demanded in vain) been insisted on with some determination in the session of the Assembly, on the 8th December, 1848, for forming the Constitution.

"It may certainly have been distasteful to the keepers of the 'secret' to come forward with it, and see *that* become common property which they had hitherto guarded with so much care—which, in their opinion, the people do not require to know, or which should only be imparted to the *initiated* and the *chosen* few.

"We come now to the revenue itself (printed and lying before us), and put it in order under relative heads, inasmuch as the official arrangement which comprehends the last three years, 1845-6, 1846-7, and 1847-8, is not very clear. To our astonishment, we miss therein, first, some of the most important items of these three years, namely, the income from income-tax, house or rent-tax, lottery-tax, and additional excise, which, together, form nearly the third part of our budget.

"Only for the year 1849, has it been thought fit to make any computation, and, truly, with a very poor result, which is extremely problematical, and, in any case, not to be looked upon with any confidence. Above all, the last year, which, as an *extraordinary* one, has disturbed and encroached upon all conditions and incomes, is, consequently, not to be taken as normal, and the conjectural balance of half a million at the close of the year will be found to be fallacious.

	1845.	1846.	1847.
Customs.	Florins.	Florins.	Florins.
Import, export, and transit dues....	351,297	366,800	361,473
Revenue (Municipal).			
Land	20,937	19,218	17,704
Water	32,735	25,185	29,243
Merchandise and grain balance	9,167	7,017	10,966
Total	414,136	418,220	419,386
Excise and Consumption Dues.			
(*a*) Meat (at the butchers)	75,000	75,000	75,000
(*b*) Salt (at the Royalty)	18,971	19,796	19,465
,, (Excise)	12,622	12,875	12,742
(*c*) Meal	67,910	67,171	77,916
(*d*) Malt	38,740	38,003	34,792
(*e*) Liquors (wine, brandy, cider, &c.	72,648	56,670	103,055
(*f*) Firewood (Wood Office)	23,412	19,893	20,913
Wood-tax at the Gates and Forest Office	4,156	3,710	3,965
(*g*) Duties at the barriers on meat, meal, bread, cakes, liquors, barley, oats, hay, straw, &c.	15,883	14,399	15,179
(*h*) Duties on land and water-carriage	36,827	33,932	37,303
(*i*) Receipts from the towers, forest-houses, and farms (Office of Woods and Forests)	1,435	2,806	1,799
(*k*) Duty on brandy distilleries, exclusive of the town	177	233	160
Total	367,785	344,492	402,294
City Domains. Government Offices (Exchequer).			
Revenue from the sale of Letters of Naturalization—			
Raw materials.....	42,975	97,157	60,848
House rents.....	39,374	39,601	37,388
Settled rents	13,348	13,237	12,135
Deputy Exchequer Office	6,745	6,913	6,552
Inscriptions generally.....	122	3,029	265
Fiefdom and loans	5,154	2,809	17,471
Total	107,620	162,748	134,662

	1845.	1846.	1847.
Government Woods.	Florins.	Florins.	Florins.
Sale of log, stock, brush-wood, fagots, &c.	113,676	66,378	65,678
Wood sales in warehouse	9,963	2,864	7,610
Wood tickets	445	480	460
Fines for trespass	711	848	459
Rent of sporting-manors	1,161	1,100	1,100
,, of arable and pasture land	1,921	2,243	1,998
Miscellaneous	586	257	1,103
Instruction money	....	1,309	1,444
Total	128,465	75,482	79,855
Government and Police Dues.			
Deposits on the purchase and sale of houses and sites	23,840	23,473	23,390
Citizen fees	18,081	16,087	19,242
Trade do.	678	529	425
Brokerage	2,766	2,836	2,927
Opera license	3,330	3,330	3,330
Licenses to hawkers	964 0	949 0	1,019 0
Auction duties	1,378 0	1,308 0	1,466 0
Stamp duties	207 0	135 0	156 0
Concessions, dispensations, &c.	2,094 0	2,024 0	2,612 0
Deposit do.	119 0	184 0	80 0
Justice do.	396 0	287 0	250 0
Fines	286 0	301 0	209 0
Total	10,314 0	9,714 0	10,724 0
Revenue on bills of exchange	8,917 0	8,858 0	9,376 0
Newspapers	1,367 0	1,421 0	1,359 0
Cards	125 0	120 0	103 0
Deeds	2,360 0	2,242 0	2,423 0
Police stamps	1,981 0	2,274 0	2,073 0
Exhibitions and Protocols	1,719 0	1,692 0	1,828 0
Total	16,469 0	16,607 0	17,162 0
Cash	316 0	168 0	986 0
Lighting	2,445 0	2,435 0	2,477 0
Paving	3,248 0	3,218 0	2,825 0
Gymnasium	919 0	965 0	946 0
Miscellaneous (monies repaid)	620 0	692 0	1,108 0
Government tax on rural towns	604 0	603 0	609 0
Arrears of land tax	6 0	....	....
Rural excise	526 0	509 0	416 0
Total	8,684 0	8,590 0	9,367 0

Note.—The discrepancies in the additions are owing to the omission of the fractions of florins.

Recapitulation.

	1845.	1846.	1847.	1849. Estimated.
Customs	351,297	366,800	361,473	366,056
Land and water-carriage, cranage and weighing dues	62,840	51,421	57,914	
Excise (⅜ths of this are the additional excise and the sinking fund)	367,785	344,392	402,294	189,225
Domains (city chamber)	107,720	162,748	134,662	100,750
Forests	128,455	75,482	79,856	50,000
Government and police dues	103,127	98,144	107,248	151,000
Stamps	164,683	166,066	171,625	
Mint (coinage)	3,160	1,684	9,866	
Lighting	24,451	24,353	24,770	5,000
Paving	32,480	32,181	28,252	
Gymnasium	9,187	9,654	9,458	....
Miscellaneous	6,202	6,921	11,079	5,000
Government tax on rural towns	11,354	11,126	10,247	8,500
Income tax				110,000
Dwelling and lodging-house tax				80,000
Lottery				120,000
Additional excise and extra war tax	500,000	500,000	500,000	103,000
Pawnbroker's licenses				7,500
Share and permission stamps				5,000
Interest on floating capital				6,000
Total	1,872,768	1,850,977	1,908,726	1,352,481

	1845. Florins.		1846. Florins.		1847. Florins.
The whole revenue, therefore, amounts to	1,872,748	....	1,850,977	....	1,908,726
Charges, including sinking fund	1,413,160	....	1,415,277	....	1,417,095
Balance, about	459,588		435,700		411,631

"Which was intended partly for paying off the annual portion of the city debt, and partly to be reserved as surplus, to provide for extraordinary expenditure, as, for example, the purchase of corn in the famine year, 1846-7, by which the State sustained a loss of 184,000 florins, which could not be borne by this surplus. Since then, the receipts from four principal sources of revenue (income-tax, house and rent-tax, lottery, and additional excise, about three-eighths the amount of the ordinary excise), which produced together more than half a million annually, have been named for providing for the state debt, whilst the charge for interest of the state debt now scarcely amounts to half that sum, viz.: 6,416,800 florins (amount of city debt on the 31st October, 1848), at 3½ per cent., 224,588f., and of 504,723 florins (amount of old debt, 1st July, 1840), 18,348f., making a total of 242,972f.

"In the report of the Commission upon the sinking fund (see Protocol of the Legislative Body, of the 2nd November, 1848, vol. 10, sect. 271), we find as follows:—'The sum total of the sinking fund balance, which formerly allowed of from 200,000 f. to 300,000 f. being

laid by annually, is now so great, that this department can undertake the payment of interest on the railway loan.'

"The railway undertaking, however, is an undertaking by itself, and should, on no account, be mixed up with the old state debt.

"A separate keeping of books and accounts, also, must take place with relation to this, on the part of the railway administration. Were the receipts of the three railways (Offenbacher, Maintneckar, and Main Weser Railways, so far as they pass through our territory) placed with the sinking fund accounts, the condition of the latter would appear in a false light, and the necessary sum for the service of the sinking fund commission would appear much lighter than was required in reality for this service; whilst, on the other hand, any insight into the railway undertaking would be only mystified and obscured.

"There are, therefore, the 20,500*l.* interest of 60,000*l.* capital of the railway loan (1,000,000*l.* is not paid up), with which the sinking fund is burthened, to be taken away from the latter, and added to the account of railways, as also the railway receipts, which also do not belong to the sinking fund account. Should the amount of the above-named taxes for the future be less than hitherto, the simple way will be, we will not say to cease altogether the annual repayments of the capital of the national debt, but to diminish them so considerably, that they will be scarcely perceptible. This is the more advisable, as only 1 per cent. of the railway loan is annually paid off, and the institutions, savings' banks, and other holders of Government paper, are satisfied, provided they receive their interest regularly. Indeed, it is not agreeable to them when their securities come by allotment to be paid off, although they have only the trouble to buy new; and if the Frankfort state debt were once paid off, what could they do with their money? Doubtless, it would be laid out in *foreign* state paper, but the advantage that would accrue from it to our State is quite plain.

"We remark that the railway undertaking is a *voluntary* one—a matter of speculation, which has nothing in common with the compulsory loans or contributions in times of war, and only stands so far in relation to it, as the State fulfils the obligations due to the creditors, let what may happen, at any time, in the government of the State."

It may be stated, in conclusion, that a very essential part of the public accounts is still wanting, namely, the *details* of expenditure; whether these are accessible or not, I do not know.

Census of the United States of America, abridged from the Report of J. C. G. Kennedy, the Superintendent of the Census, to the Hon. Alexander H. H. Stuart, Secretary of the Department of the Interior: dated Census Office, Washington, December 1, 1851.

FULL and complete returns of the Seventh Census have been received from all the States of the Union on this side of the Rocky Mountains and from the territories of New Mexico and Oregon. A portion of the Californian returns were destroyed by the conflagration at San Francisco. The other returns have been received. The returns from Utah are expected by the first mail from that territory.

The schedules used in taking the Seventh Census of the United States were arranged on principles different from any heretofore used for that purpose. The blanks were prepared under the direction of the Census Board.

The expenses of the Census Office have been as follows, viz.:

	Dols.	C.
For printing and stationery	33,153	71
Paid United States Marshals	34,001	25
Paid to Assistant-Marshals	891,245	18
Paid for clerk hire and contingent expenses of the office	105,929	66
The aggregate amount appropriated for taking the Seventh Census was	1,267,500	00
The balance on hand this 1st day of December, 1851	203,170	00
The balance due to Marshals and Assistant-Marshals of United States	130,201	00
Contingent expenses, including clerk hire, office rent, fuel, stationery, &c., to the 30th day of June, 1853, estimated at	150,000	00

The cost of printing the compilation of the Seventh Census forms no portion of this estimate. The office-staff, originally employed, consisted of 91 clerks and 5 other persons. The number of clerks was soon afterwards increased to 148.

In the performance of the work there have been engaged 45 marshals and 3,231 assistants; to each of whom, in addition to the schedules, were sent pamphlets of printed instructions, together with "form" schedules ready filled up for their guidance.

In the compilation of the Seventh Census it has not been deemed necessary to divide the population (as has been done heretofore) into divisions other than by counties, cities, wards, or boroughs. Each county in the United States possesses a copy of its own returns, and for its own purposes it enjoys facilities of arriving at the interests of the separate towns or townships—divisions, uninteresting to the community at large. Each separate state possesses also a copy of the complete returns of the whole state, and from these may easily subdivide, for state purposes, as minutely as desirable.

The utmost care has been exercised to insure correct returns; the name of each person to whom every entry on the tables applies has been furnished. In all cases where error or inconsistency could be detected, real or imaginary, the individual has been written to, in

order that the discrepancy might be corrected. The replies have been, for the most part, prompt and satisfactory. It has been necessary, in only three cases, to call the attention of an United States district attorney to require enforcement of the act of Congress for refusal to reply to the interrogations of the assistants. In all but one of these cases return has been eventually made without the necessity of making costs to the parties—in that excepted, the individual paid costs before appearance, and made satisfactory return to the office.

Since the census of 1840, there have been added to the territory of the republic, by annexation, conquest, and purchase, 824,969 square miles; and our title to a region covering 341,463 square miles, which before properly belonged to us, but was claimed and partially occupied by a foreign Power, has been established by negotiation, and it has been brought within our acknowledged boundaries. By such means the area of the United States has been extended, during the past ten years, from 2,055,163 to 3,221,595 square miles, without including the great lakes which lie upon our northern border, or the bays which indent our Atlantic and Pacific shores; all which has come within the scope of the Seventh Census.

In the endeavour to ascertain the progress of our population since 1840, it will be proper to deduct from the aggregate number of inhabitants, shown by the present census, the population of Texas in 1840, and the number embraced within the limits of California and the new territories at the time of their acquisition. From the best information which has come to hand, it is believed that Texas contained, in 1840, 75,000 inhabitants; and that when California, New Mexico, and Oregon came into our possession, in 1846, they had a population of 97,000. It thus appears that we have received, by accessions of territory, since 1840, an accession of 172,000 to the number of our people.

Assuming the population of California to be 165,000 (which we do partly by estimate), and omitting that of Utah,* estimated at 12,000, the total number of inhabitants in the United States was, on the 1st of June, 1850, 23,246,301. The absolute increase from the 1st of June, 1840, has been 6,176,848, and the actual increase per cent. is 36·18. But it has been shown that the probable amount of population acquired by additions of territory should be deducted in making a comparison between the results of the present and the last census. These reductions diminish the total population of the country, as a basis of comparison, to 23,074,301, and the increase to 6,004,848. The relative increase, after this allowance, is found to be 35·17 per cent. The aggregate number of whites, in 1850, was 19,619,366, exhibiting a gain upon the number of the same class, in 1840, of 5,423,371, and a relative increase of 38·20 per cent. But excluding the 153,000 free population, supposed to have been acquired by the addition of territory since 1840, the gain is 5,270,371, and the increase per cent. is 37·14.

The number of slaves, by the present census, is 3,198,298, which shows an increase of 711,085, equal to 28·58 per cent. If we deduct 19,000 for the probable slave-population of Texas in 1840, the result

* Since ascertained to be 11,381.

of the comparison will be slightly different. The absolute increase will be 692,085, and the rate per cent. 27·83.

The number of free coloured, in 1850, was 428,637; in 1840, 386,245. The increase of this class has been 42,392, or 10·95 per cent.

From 1830 to 1840, the increase of the whole population was at the rate of 32·67 per cent. At the same rate of advancement, the absolute gain for the ten years last past would have been 5,578,333, or 426,515 less than it has been, without including the increase consequent upon additions of territory.

The aggregate increase of population, from all sources, shows a relative advance greater than that of any other decennial term, except that from the second to the third census, during which time the country received an accession of inhabitants, by the purchase of Louisiana, considerably greater than 1 per cent. of the whole number. Rejecting from the census of 1810, 1·45 per cent., for the population of Louisiana, and from the census of 1850, 1 per cent. for that of Texas, California, &c., the result is in favour of the last ten years by about $\frac{1}{14}$ of 1 per cent.; the gain from 1800 to 1810 being 35·05 per cent; and from 1840 to 1850, 35·12 per cent. But, without going behind the sum of the returns, it appears that the increase from the second to the third census was $\frac{32}{100}$ of 1 per cent. greater than the increase from the sixth to the seventh.

The decennial increase of the most favoured portions of Europe is less than $1\frac{1}{2}$ per cent. per annum, while with the United States it is at the rate of $3\frac{1}{2}$ per cent. According to our past progress, viewed in connection with that of European nations, the population of the United States in forty years will exceed that of England, France, Spain, Portugal, Sweden, and Switzerland, combined.

The relative progress of the several races and classes of the population is shown in the following tabular statement:

Increase per Cent. of each Class of Inhabitants in the United States for Sixty Years.

Classes.	1790 to 1800.	1800 to 1810.	1810 to 1820.	1820 to 1830.	1830 to 1840.	1840 to 1850.
Whites	35·7	36·2	34·19	33·95	34·7	38·28
Free coloured	82·2	72·2	25·25	36·85	20·9	10·9
Slaves	27·9	33·4	29·1	30·61	23·8	28·58
Total coloured	32·2	37·6	28·58	31·44	23·4	26·22
Total population	35·01	36·45	33·12	33·48	32·67	36·25

The census had been taken previously to 1830, on the 1st of August; the enumeration began that year on the 1st of June, two months earlier, so that the interval between the fourth and fifth censuses was two months less than ten years, which time, if allowed for, would bring the total increase up to the rate of 34·36 per cent.

The following table shows the increase from 1790 to 1850, without reference to intervening periods:

umber of	1790.	1850.	Absolute Increase in Sixty Years.	Increase per Cent. in Sixty Years.
Whites	3,172,464	19,638,019	16,457,555	527·97
Free coloured	59,466	428,637	369,171	617·44
Slaves	697,897	3,184,262	2,486,365	350·13
Total free coloured and slaves	757,363	3,612,899	2,855,536	377·00
Total population	3,929,827	23,246,301	19,316,444	491·52

Sixty years since, the proportion between the whites and blacks, bond and free, was 4·2 to 1. In 1850, it was 5·26 to 1; and the ratio in favour of the former race is increasing. Had the blacks increased as fast as the whites during these sixty years, their number, on the 1st of June, would have been 4,657,239; so that, in comparison with the whites, they have lost, in this period, 1,035,340.

This disparity is much more than accounted for by European emigration to the United States. Dr. Chickering, in an essay upon emigration, published at Boston in 1848—distinguished for great elaborateness of research—estimates the gain of the white population, from this source, at 3,922,152. No reliable record was kept of the number of emigrants into the United States until 1820, when, by the law of March, 1819, the collectors were required to make quarterly returns of foreign passengers arriving in their districts. For the first 10 years, the returns under the law afford materials for only an approximation to a true state of the facts involved in this inquiry.

Dr. Chickering assumes, as a result of his investigations, that of the 6,431,088 inhabitants of the United States in 1820, 1,430,906 were foreigners, arriving subsequent to 1790, or the descendants of such. According to Dr. Seybert, an earlier writer upon statistics, the number of foreign passengers, from 1790 to 1810, was, as nearly as could be ascertained, 120,000; and from the estimates of Dr. Seybert, and other evidence, the Hon. George Tucker, author of a valuable work on the census of 1840, supposes the number, from 1810 to 1820, to have been 114,000. These estimates make, for the 30 years preceding 1820, 234,000.

If we reckon the increase of these emigrants at the average rate of the whole body of white population during these three decades, they and their descendants, in 1820, would amount to about 360,000. From 1820 to 1830, there arrived, according to the returns of the custom-houses, 135,986 foreign passengers, and from 1830 to 1840, 579,370, making, for the 20 years, 715,356. During this period, a large number of emigrants from England, Scotland, and Ireland came into the United States through Canada. Dr. Chickering estimates the number of such, from 1820 to 1830, at 67,993; and from 1830 to 1840, at 199,130—for the 20 years together, 267,123. During the same time, a considerable number are supposed to have landed at

New York with the purpose of pursuing their route to Canada; but it is probable that the number of these was balanced by the omissions in the official returns.

From 1840 to 1850, the arrivals of foreign passengers, in the ports of the United States, have been as follows:

1840–41	83,504	1847	234,756
1842	101,107	1848	226,524
1843	75,159	1849	269,610
1844	74,607	1850†	173,011
1845	102,415		
1846*	202,157	Total	1,542,850

Within the last 10 years there has probably been very little immigration of foreigners into the United States over the Canada frontier; the disposition to take the route by Quebec having yielded to the increased facilities for direct passenger transportation to the cities of the Union; what there has been may, perhaps, be considered as equalled by the number of foreigners passed into Canada, after landing at New York, many having been drawn thither by the opportunities of employment afforded by the public works of the province. As the heaviest portion of this great influx of immigration took place in the latter half of the decade, it will probably be fair to estimate the natural increase during the term at 12 per cent., being about one-third of that of the white population of the country at its commencement.

Taking for granted the substantial correctness of the above estimates, and the accuracy of the returns during the last ten years, the following statement will show the accessions to our population from immigration, from 1790 to 1850:

Number of foreigners arriving from 1790 to 1810	120,000
Natural increase, reckoned in periods of 10 years	47,560
Number of foreigners arriving from 1810 to 1820	114,000
Increase of the above to 1820	19,000
Increase from 1810 to 1820 of those arriving previous to 1810	58,450
Total number of immigrants and descendants of immigrants in 1820	359,010
Number of immigrants arriving from 1820 to 1830	203,979
Increase of the above	35,728
Increase from 1820 to 1830 of immigrants and descendants of immigrants in the country in 1820	134,130
Total number of immigrants and descendants of immigrants in the United States in 1830	732,847
Number of immigrants arriving from 1830 to 1840	778,500
Increase of the above	135,150
Increase from 1830 to 1840 of immigrants and descendants of immigrants in the United States in 1830	254,445
Total number of immigrants and descendants of immigrants in the United States in 1840	1,900,942

* This return includes 15 months, from July 1, 1845, to 30th September, 1846.

† The report from the State Department for this year, gives 315,333, as the total number of passengers arriving in the United States; but of these 30,023 were citizens of the Atlantic States proceeding to California by sea, and 5,320 natives of the country returning from visits abroad. A deduction of 106,879 is made from the balance, for that portion of the year from June 1 to September 30.

Number of immigrants arriving from 1840 to 1850	1,542,850
Increase of the above at 12 per cent.	185,142
Increase from 1840 to 1850 of immigrants and descendants of immigrants in the United States in 1840	722,000
Total number of immigrants into the United States since 1790, and their descendants in 1850	4,350,934

The following table has been prepared from the most authentic data accessible to this office:

Table of the Area and the Number of Inhabitants to the Square Mile in each State and Territory in the Union.

States.	Area in Square Miles.	Population in 1850.	Number of Inhabitants to Square Miles.
Maine	30,000	583,188	19·44
New Hampshire	9,280	317,964	34·26
Vermont	10,212	313,611	30·07
Massachusetts	7,800	994,499	126·11
Rhode Island	1,306	147,544	108·05
Connecticut	4,674	370,791	79·83
New York	46,000	3,097,394	67·66
New Jersey	8,320	489,555	60·04
Pennsylvania	46,000	2,311,786	50·25
Delaware	2,120	91,535	43·64
Maryland	9,356	583,035	62·31
Virginia	61,352	1,421,661	23·17
North Carolina	45,000	868,903	19·30
South Carolina	24,500	668,507	27·28
Georgia	58,000	905,999	15·68
Alabama	50,722	771,671	15·21
Mississippi	47,156	606,555	12·86
Louisiana	46,431	511,974	11·02
Texas	237,321	212,592	·89
Florida	59,268	87,401	1·47
Kentucky	37,680	982,405	26·07
Tennessee	45,600	1,002,625	21·98
Missouri	67,380	682,043	10·12
Arkansas	52,198	209,639	4·01
Ohio	39,964	1,980,408	49·55
Indiana	33,809	988,416	29·23
Illinois	55,405	851,470	15·37
Michigan	56,243	397,654	7·07
Iowa	50,914	192,214	3·77
Wisconsin	53,924	305,191	5·65
California	188,982	....	....
Minnesota	83,000	6,077	·07
Oregon	341,463	13,293	·03
New Mexico	219,774	61,505	·28
Utah	187,923	11,381	....
Nebraska	136,700	....	....
Indian	187,171	....	....
North West	587,564	....	....
District of Columbia	60	51,687	861·45

The States of the Union may be properly arranged into the following groups:

	Area in Square Miles.	Population.	Number of Inhabitants to Square Miles.
New England States (6)	63,226	2,727,597	43·07
Middle States, including Maryland, Delaware, and Ohio (6)	151,760	8,653,713	57·02
Coast Planting States, including South Carolina, Georgia, Florida, Alabama, Mississippi and Louisiana (6)	286,077	3,537,089	12·36
Central Slave States: Virginia, North Carolina, Tennessee, Kentucky, Missouri, Arkansas (6)	308,210	5,168,000	16·75
North-western States: Indiana, Illinois, Michigan, Wisconsin, and Iowa (5)	250,000	2,735,000	10·92
Texas	237,000	212,000	·89
California	189,000	165,000	·87

Taking the thirty-one States together, their area is 1,485,870 square miles, and the average number of their inhabitants is 15·48 to the square mile. The total area of the United States is 3,220,000 square miles, and the average density of population is 7·219 to the square mile.

The area of some of the States, as Maryland and Virginia, is stated considerably below the commonly-assumed extent of their territory, which may be accounted for from the supposition that the portions of the surface within their exterior limits covered by large bodies of water, have been subtracted from the aggregate amount. This is known to be the case in regard to Maryland, the superficial extent of which, within the outlines of its boundaries, is 13,959 square miles; and is deemed probable with reference to Virginia, from the fact that many geographers have given its total area as high as 66,000 square miles.

It appears from the returns, that during the year ending on the 1st of June, 1850, there escaped from their owners 1,011 slaves, and that during the same period 1,467 were manumitted. The number of both classes will appear in the following table:

Manumitted and Fugitive Slaves—1850.

	Manumitted.	Fugitives.		Manumitted.	Fugitives.
Delaware	277	26	Alabama	16	29
Maryland	493	279	Mississippi	6	41
Virginia	218	83	Louisiana	159	90
Kentucky	152	96	Texas	5	29
Tennessee	45	70	Arkansas	1	21
North Carolina	2	64	Missouri	50	60
South Carolina	2	16			
Georgia	19	89	Total	1,467	1,011
Florida	22	18			

During the year to which the census applies, the Colonization Society sent 562 coloured emigrants to Liberia.

Mortality.—The statistics of mortality for the census year represent the number of deaths occurring within the year as 320,194, the ratio being as one to 72·6 of the living population, or as 10 to each 726 of the population. The rate of mortality in this statement seems so much less than that of any portion of Europe, that it must, at present, be received with some degree of allowance. Should a more critical examination prove the returns of the number of deaths too small, such a result will not affect their value, for the purposes of comparison of one portion of the country with another.

Table of Deaths during the Year ending the 1st June, 1850.

	Number of Deaths.	Living to one Death.		Number of Deaths.	Living to one Death.
Maine	7,545	77·29	Texas	3,046	69·79
New Hampshire	4,268	74·49	Florida	933	93·67
Vermont	3,132	100·13	Kentucky	15,206	64·60
Massachusetts	19,414	51·23	Tennessee	11,759	85·34
Rhode Island	2,241	65·83	Missouri	12,211	55·81
Connecticut	5,781	64·13	Arkansas	2,987	70·18
New York	44,339	69·85	Ohio	28,949	68·41
New Jersey	6,467	75·70	Indiana	12,728	77·65
Pennsylvania	28,318	81·63	Illinois	11,619	73·28
Delaware	1,209	75·71	Michigan	4,520	88·19
Maryland	9,594	60·77	Iowa	2,044	94·03
Virginia	19,053	74·61	Wisconsin	2,884	105·82
North Carolina	10,207	85·12	California	....	....
South Carolina	7,997	83·59	Minnesota	30	202·56
Georgia	9,920	91·33	Oregon	47	282·82
Alabama	9,084	84·94	New Mexico	1,157	53·15
Mississippi	8,711	69·63	Utah	239	47·61
Louisiana	11,948	42·85	District of Columbia	846	61·09

Agriculture.—The great amount of labour requisite to the extraction of the returns of agriculture will admit, at this time, of presenting

but limited accounts, though, perhaps to some extent, of the most important separate interests.

The returns of the wheat crop, for many of the Western States, will not at all indicate the average crop of those States. This is especially the case with Ohio, Indiana, and Illinois, from which, especially the former, the assistant marshals return a "short crop," to the extent of fifty per cent. throughout the whole state. The shortness of the wheat crop in Ohio, in 1849, is verified by returns made during the subsequent season, by authority of the Legislature. The causes which affected the wheat crop in those states were not without their influence in reducing that of Western Virginia and Western Pennsylvania to some considerable extent.

Manufactures.—The period which has elapsed since the receipt of the returns has been so short, as to enable the office to make but a general report of the facts relating to a few of the most important manufactures. If, in some instances, the amount of "capital invested" in any branch of manufacture should seem too small, it must be borne in mind that, where the product is of several kinds, the capital invested, not being divisible, is connected with the product of greatest consequence. This, to some extent, reduces the capital invested in the manufacture of bar iron, in such establishments where some other article of wrought iron predominates—sheet iron, for example. The aggregate, however, of the capital invested, in the various branches of wrought iron, will, it is confidently believed, be found correct.

	Dollars.
The entire capital invested in the various manufactures in the United States, on the 1st of June, 1850—not to include any establishments producing less than the annual value of 500 dollars—amounted in round numbers to	530,000,000
Value of raw material	550,000,000
Amount paid for labour	240,000,000
Value of manufactured articles	1,020,300,000
Number of persons employed	1,050,000

More minute particulars respecting these separate interests will be found incorporated in tables A, B, C, D, E, F, G.

The Press.—The statistics of the newspaper press form an interesting feature in the returns of the seventh census.

It appears that the whole number of newspapers and periodicals in the United States, on the 1st day of June, 1850, amounted to 2,800. Of these, 2,494 were fully returned, 234 had all the facts excepting circulation given, and 72 are estimated for California, the Territories, and for those that may have been omitted by the assistant marshals.

From calculations made on the statistics returned, and estimated circulations where they have been omitted, it appears that the aggregate circulation of these 2,800 papers and periodicals is about 5,000,000, and that the entire number of copies printed annually in the United States, amounts to 422,600,000.

Four hundred and twenty-four papers are issued in the New England States, 876 in the Middle States, 716 in the southern states, and 784 in the Western States.

The following table will show the number of daily, weekly,

monthly, and other issues, with the aggregate circulation of each class :—

	Number.	Circulation.	Number of Copies Printed Annually.
Dailies	350	750,000	235,000,000
Tri-weeklies	150	75,000	11,700,000
Semi-weeklies	125	80,000	8,320,000
Weeklies	2,000	2,875,000	149,500,000
Semi-Monthlies	50	300,000	7,200,000
Monthlies	100	900,000	10,800,000
Quarterlies	25	29,000	80,000
	2,800	5,000,000	422,600,000

The average circulation of papers in the United States is 1,785. There is one publication for every 7,161 free inhabitants in the United States and Territories.

Plan of United States' Census.—The variations from the plans heretofore adopted in the compilation of the decennial census, with every portion of which the facilities of comparison are maintained, consist:

1. In the form—that adopted being in conformity with the size and appearance of the "American Archives."

2. In accompanying the statistics of each state with a condensed account of the most important events connected with its history, from its first settlement; exhibiting the progress of our whole social system, to the year 1850; also, in presenting as short accounts of each separate county, from the date of its settlement, with the date of its organization; an account of its physical features, its rocks, minerals, streams, timber, water, and adaptation, naturally and artificially, to the purposes of agriculture, manufactures, and commerce.

3. In the general geological account of the state.

4. In the account of its progress in population, from the first to the seventh census, inclusive, with tables of population; to make which correctly, it has been necessary to refer to the original returns of the census 20 and 30 years back, as reliance could not be placed on the figures officially given in the printed work.

5. In the review of its character for the health and longevity of its inhabitants, an account of the prevailing diseases and rates of mortality, with full tables, presenting a perfect history of the statistics of disease and mortality, and calculations of the value of life among the several classes.

6. In the number of new subjects embraced in the statistical details and in the manner of classification, so as to admit of extracting all the essential facts respecting the raw materials of each variety of manufactures, together with other features in which the statist will perceive variations from any previous census.

Statement of the Population in each State and Territory

		1790.	1800.	Ratio of Increase.	1810.	Ratio of Increase.	1820.
New England.	Maine	96,540	151,719	57·1	228,705	50·7	298,335
	New Hampshire	141,899	183,762	29·5	214,360	16·6	244,161
	Vermont	85,416	154,465	80·8	217,713	41·0	235,764
	Massachusetts	378,717	423,245	11·7	472,040	11·5	523,287
	Rhode Island	69,110	69,122	...	77,031	11·4	83,059
	Connecticut	238,141	251,002	5·4	262,042	4·3	275,202
		1,009,823	1,233,315	22·1	1,471,891	19·3	1,659,808
Middle.	New York	340,120	586,756	72·50	959,049	63·40	1,372,812
	New Jersey	184,139	211,949	15·10	245,555	15·90	277,575
	Pennsylvania	434,373	602,365	38·60	810,091	34·40	1,049,458
		958,632	1,401,070	46·15	2,014,695	43·79	2,699,845
Atlantic.	Delaware	59,096	64,273	8·70	72,674	13·00	72,749
	District of Columbia	...	14,093	...	24,023	36·80	33,039
	Maryland	319,728	341,548	6·80	380,546	11·40	407,350
	Virginia	748,308	880,200	17·60	974,622	10·70	1,065,379
	North Carolina	393,751	478,103	21·30	555,500	16·20	638,829
	South Carolina	249,073	345,591	38·70	415,115	20·10	502,741
	Georgia	82,548	162,101	96·40	252,433	55·10	340,987
	Florida	...	...	...	...	...	...
		1,852,504	2,285,909	23·39	2,674,913	17·01	3,061,074
North-western.	Ohio	...	45,365	...	230,760	408·70	581,434
	Indiana	...	4,875	...	24,520	403·00	147,178
	Illinois	...	...	...	12,282	...	55,211
	Iowa	...	...	...	...	...	...
	Wisconsin	...	...	...	...	...	...
	Michigan	...	...	...	4,762	...	8,896
	Minnesota (Territory)	...	...	...	...	...	...
		...	50,240	...	272,324	442·04	792,719
Southern and Western.	Kentucky	73,077	220,955	200·00	406,511	83·1	564,317
	Missouri	...	...	...	20,845	...	66,586
	Alabama	...	...	...	...	...	127,901
	Louisiana	...	...	...	76,556	...	153,407
	Tennessee	35,791	105,602	200·00	261,727	147·8	422,813
	Mississippi	...	8,850	...	40,352	356·0	75,448
	Arkansas	...	...	...	...	...	14,273
	Texas	...	...	...	...	...	...
	New Mexico (Territory)	...	...	...	...	...	...
		108,868	335,407	208·08	805,991	140·3	1,424,745
California*		...	...	...	...	...	...
Oregon, Utah† Territories		...	...	...	...	...	...
		...	...	...	...	...	...
Seamen in United States' service		...	...	...	...	...	...
Total		3,929,827	5,305,941	35·01	7,239,814	36·46	9,638,191

Statement of Population by Classes deeennially,

Whites	3,172,464	4,304,489	35·7	5,862,004	36·2	7,866,569
Free Coloured	59,466	108,395	82·2	186,446	72·2	233,524
Slaves	697,897	893,057	27·9	1,191,364	33·4	1,538,098
Seamen in United States' service	...	...	...	...	...	...
	3,929,827	5,305,941	...	7,239,814	...	9,638,191
Total Free	3,231,930	4,412,884	36·4	6,048,450	37·0	8,100,093
Total Coloured Population, Free and Slaves	757,363	1,001,452	32·2	1,377,810	37·6	1,771,622

* The population of California is set down at 165,000, as an approximation to the real population, which the population of California 30,000, South Carolina will be entitled to a member additional, as being next the aggregate increase of the free population for the year 1850. Ratio of Representation, 93,716.

† The returns of Utah have been received since the preparation of this report.

decennially, commencing 1790 *to* 1850 *inclusive.*

Ratio of Increase.	1830.	Ratio of Increase.	1840.	Ratio of Increase.	1850.	Ratio of Increase.	Representatives of each State.		Present No. of Representatives.
							Number.	Fractions.	
30·4	399,455	33·9	501,793	26·2	583,188	16·22	6	20,892	7
13·9	269,328	10·3	284,574	5·6	317,964	11·63	3	36,816	4
8·2	280,652	19·0	291,948	4·0	314,120	7·59	3	32,972	4
10·9	610,408	16·6	737,699	20·8	994,499	34·81	11	*57,339	10
7·8	97,199	17·0	108,830	11·9	147,544	35·57	2	*53,828	2
5·0	297,675	8·1	309,978	4·1	370,791	19·61	4	*89,643	4
12·8	1,954,717	17·7	2,234,822	14·3	2,728,106	22·07			
43·1	1,918,608	39·70	2,428,921	26·60	3,097,394	27·52	33	4,766	34
13·0	320,823	15·50	373,306	16·30	489,555	31·14	5	20,886	5
29·5	1,348,233	28·50	1,724,033	27·90	2,311,786	34·09	25	*62,602	24
34·0	3,587,664	32·88	4,526,260	26·16	5,898,735	30·32			
...	76,748	5·5	78,085	1·70	91,535	17·22	1	...	1
37·50	39,834	29·2	43,712	23·30	51,687	18·24			
7·00	447,040	9·7	470,019	5·10	583,035	24·04	6	*78,307	6
9·30	1,211,405	13·7	1,239,797	2·30	1,421,661	14·66	13	14,341	15
15·00	737,987	15·5	753,419	2·10	868,903	15·32	8	3,810	9
18·10	581,185	15·6	594,398	2·30	668,507	12·46	5	45,933	7
35·10	516,823	51·2	691,392	33·80	905,999	31·03	8	3,598	8
...	34,730	...	54,477	56·80	87,401	60·43	1	...	1
14·43	3,646,752	19·1	3,925,299	7·66	4,678,728	19·19			
152·00	937,903	61·30	1,519,467	62·00	1,980,408	30·33	21	12,372	21
500·20	343,031	133·00	685,866	99·90	988,416	44·11	11	*51,256	10
349·50	157,445	185·20	476,183	202·40	851,470	78·81	9	8,026	7
...	...	...	43,112	...	192,214	345·84	2	4,782	2
...	...	...	30,945	...	305,191	890·48	3	24,043	3
86·80	31,639	255·60	212,267	570·90	397,654	87·33	4	22,790	3
...	...	...	...	...	6,077				
191·09	1,470,018	85·43	2,967,840	101·89	4,721,430	59·08			
38·80	687,917	21·90	779,828	13·30	982,405	25·98	10	*54,568	10
219·50	140,455	110·90	383,702	173·20	682,043	77·75	7	*84,778	5
...	309,527	142·00	590,756	90·80	771,671	30·62	7	*72,218	7
100·40	215,739	40·60	352,411	63·30	511,974	45·27	4	41,501	4
61·50	681,904	61·30	829,210	21·60	1,002,625	20·91	10	*63,396	11
87·00	136,621	81·00	375,651	175·00	606,555	61·46	5	14,015	4
...	30,388	112·90	97,574	221·10	209,639	114·85	2	3,414	1
...	...	...	...	...	212,592	...	2	1,865	2
...	...	...	...	...	61,547				
76·76	2,202,551	54·59	3,409,132	54·78	5,041,051	47·86			
...	...	...	...	...	165,000	...	2		2
...	...	...	...	...	13,293			* Have the addition on account of the fractions.	
...	...	...	...	...	11,380				
...	5,318	...	6,100						
33·12	12,866,020	33·48	17,069,453	32·67	23,257,723	36·25	233		235

from 1790 *to* 1850 *inclusive.*

34·19	10,537,378	33·95	14,189,895	34·7	19,630,738	38·28
25·25	319,599	36·85	386,245	20·9	428,661	10·90
29·10	2,009,043	30·61	2,487,213	23·8	3,198,324	28·58
...	...	...	6,100‡			
...	12,866,020	...	17,069,453	...	23,257,723	36·25
33·92	10,856,977	34·03	14,576,140	34·1	20,059,399	37·61
28·58	2,328,642	31·44	2,873,458	23·4	3,626,985	26·22

may be essentially varied by complete returns. Should the returns vary from our estimate so far as to reduce above on the list of fractions. The official returns of California will *slightly* affect the calculation respecting

‡ Added to white population.

TABLE A.—*Agricultural Productions.*

STATE.	Acres of Land Improved.	Value of Farming Implements and Machinery.	Value of Live Stock.	Bushels of Wheat.	Bushels of Indian Corn.
Maine	2,019,593	$2,363,517	$9,831,488	367,980	1,741,715
New Hampshire	2,251,388	2,314,125	8,871,901	185,658	1,573,670
Vermont	2,322,923	2,774,959	11,292,748	493,666	1,625,776
Massachusetts	2,127,924	3,173,809	9,619,964	29,784	2,326,167
Rhode Island	337,672	473,385	1,466,636	39	516,133
Connecticut	1,734,277	2,043,026	7,353,996	40,167	1,996,462
New York	12,285,077	22,217,563	74,672,356	13,073,357	17,844,808
New Jersey	1,770,337	4,267,124	10,678,264	1,508,216	8,605,396
Pennsylvania	8,619,631	14,931,993	42,146,711	15,482,191	19,707,792
Delaware	524,364	471,385	1,718,386	466,784	2,888,896
Maryland	2,797,905	2,463,443	7,997,634	4,494,680	11,104,631
District of Columbia	17,083	40,220	71,573	17,370	65,280
Virginia	10,150,106	7,021,658	33,607,962	14,516,950	35,538,582
North Carolina	5,443,137	4,056,006	17,837,108	2,147,899	28,286,999
South Carolina	4,074,855	4,143,709	15,060,015	1,066,278	16,272,308
Georgia	6,323,426	5,901,050	25,727,408	1,085,784	30,428,540
Florida	349,423	675,885	2,945,668	1,225	1,993,462
Alabama	4,387,088	5,066,814	31,558,686	292,429	28,485,966
Mississippi	3,489,640	5,759,738	19,303,593	215,181	21,836,154
Louisiana	1,567,998	11,326,310	10,983,508	84	10,915,051
Texas	635,913	2,095,308	10,263,086	42,448	5,796,735
Arkansas	780,333	1,594,941	6,728,254	193,902	8,857,296
Tennessee	5,087,057	5,351,178	29,134,193	1,638,470	52,137,863
Kentucky	6,068,633	5,388,092	29,898,386	2,184,763	58,922,788
Ohio	9,730,650	12,716,153	43,276,187	14,967,056	59,788,750
Michigan	1,923,582	2,764,171	8,005,429	4,918,706	5,620,215
Indiana	5,019,822	6,748,722	22,398,965	6,625,474	52,887,564
Illinois	5,114,041	6,349,826	24,817,954	9,433,965	57,179,283
Missouri	2,911,422	3,977,449	19,764,672	2,943,840	35,709,042
Iowa	814,173	1,202,978	3,602,769	1,442,074	8,475,027
Wisconsin	1,011,308	1,701,047	4,594,717	4,292,208	1,983,378
California	34,312	88,593	3,456,725	98,282	90,082
Minnesota	5,035	15,981	103,859	3,422	16,665
Oregon	135,357	183,403	1,875,989	228,882	2,928
Utah	15,219	78,495	533,951	103,441	9,144
New Mexico	161,296	78,217	1,504,497	196,575	355,795
Total	112,042,000	151,820,273	552,705,238	104,799,230	591,586,053

TABLE A.—*Agricultural Productions*—(Continued).

STATE.	Tobacco, Pounds of.	Ginned Cotton, Bales of 400 lbs. each.	Wool, Pounds of.	Wine, Gallons of.	Butter, Pounds of.	Cheese, Pounds of.
Maine	....	....	1,366,866	306	8,488,234	2,201,105
New Hampshire	50	....	1,108,476	35	6,977,056	3,196,563
Vermont	....	....	3,492,087	140	12,128,095	6,755,006
Massachusetts	119,306	....	576,736	4,122	7,825,337	7,124,461
Rhode Island	....	....	111,937	842	1,066,625	296,748
Connecticut	1,383,932	....	512,529	3,346	6,620,579	4,512,019
New York	70,222	....	10,021,507	6,483	82,043,823	49,785,905
New Jersey	....	....	375,932	517	9,070,710	500,819
Pennsylvania	857,619	....	4,784,367	23,839	40,554,741	2,395,279
Delaware	....	....	52,887	85	1,034,867	3,187
Maryland	21,199,281	....	477,438	2,099	4,206,160	3,925
District of Columbia	15,000	....	....	863	14,869	....
Virginia	56,516,492	2,767	2,850,909	4,280	11,126,795	434,850
North Carolina	12,058,147	98,028	915,289	10,801	4,144,258	95,043
South Carolina	73,235	300,901	487,243	3,680	2,979,975	4,810
Georgia	420,123	494,023	988,802	664	4,640,074	46,391
Florida	982,584	45,078	23,235	10	375,853	18,324
Alabama	163,605	560,360	637,829	14	3,961,592	30,423
Mississippi	48,349	494,774	556,057	301	4,388,112	20,314
Louisiana	23,922	163,034	105,393	....	685,136	1,148
Texas	60,770	55,945	122,118	94	2,319,574	92,018
Arkansas	224,164	64,987	181,427	10	1,854,104	28,440
Tennessee	20,144,380	192,635	1,340,833	204	8,130,686	179,577
Kentucky	55,765,259	1,669	2,246,168	4,202	10,115,267	228,744
Ohio	10,480,967	....	10,089,607	44,834	34,180,458	21,350,478
Michigan	2,225	....	2,047,364	1,443	7,043,794	1,012,551
Indiana	1,035,146	5	2,502,763	13,004	12,748,186	666,986
Illinois	844,129	8	2,129,139	2,343	12,605,554	1,283,758
Missouri	17,038,364	....	1,635,182	10,193	7,762,124	201,597
Iowa	2,012	....	363,398	420	1,933,128	198,444
Wisconsin	768	....	243,065	68	888,816	440,961
California	1,000	....	4,800	....	705	150
Minnesota	....	....	260	....	1,100	....
Oregon	325	....	29,596	....	211,734	36,030
Utah	....	....	8,897	....	74,064	32,646
New Mexico	1,118	....	32,641	2,053	101	5,887
Total	199,532,494	2,474,214	52,422,797	141,295	312,202,286	103,184,585

TABLE A.—*Agricultural Productions*—(Continued).

STATE.	Hay, Tons of.	Hemp, Dew-rotted, Tons of.	Hemp, Water-rotted, Tons of.	Flaxseed, Bushels of.	Maple Sugar, Pounds of.	Cane Sugar, Hhds. of 1,000 lbs.	Value of Home-made Manufactures.
Maine	794,780	....	....	362	87,541	....	$510,998
New Hampshire	598,854	....	....	94	1,292,429	....	393,455
Vermont	763,579	....	....	307	5,159,641	....	261,589
Massachusetts	645,749	5	....	72	768,596	....	210,076
Rhode Island	73,353	....	....	....	....	....	26,098
Connecticut	499,706	....	....	9,775	37,781	....	188,995
New York	3,714,734	81	20	53,824	10,310,764	....	1,227,170
New Jersey	429,119	....	....	12,353	5,886	....	110,350
Pennsylvania	1,826,265	173	686	43,627	2,218,644	....	755,104
Delaware	30,159	....	16	838	....	....	32,809
Maryland	145,070	63	....	2,816	47,740	....	111,828
Distr. of Columbia	1,974	....	....	....	....	....	75
Virginia	370,177	3,450	1,149	53,333	1,223,905	....	2,156,073
North Carolina	145,180	13	478	38,183	27,448	½	2,008,884
South Carolina	25,427	....	....	11	200	150	909,546
Georgia	23,427	....	....	585	50	1,273	1,888,093
Florida	2,620	....	....	....	....	47,411	74,362
Alabama	31,801	....	70	54	473	28	1,890,258
Mississippi	12,517	2	....	21	110	278	1,165,195
Louisiana	20,672	....	....	....	260	262,486	138,773
Texas	8,327	....	....	16	....	7,017	265,526
Arkansas	3,924	....	145	695	8,825	....	644,928
Tennessee	72,942	405	535	19,405	159,647	....	3,168,116
Kentucky	115,296	37,168	2,685	80,458	388,525	....	2,487,493
Ohio	1,360,637	628	464	185,598	4,521,643	....	1,696,601
Michigan	394,717	40	14	1,186	2,423,897	....	354,936
Indiana	402,791	794	775	35,803	2,921,638	....	1,647,200
Illinois	586,011	1,099	1,828	11,873	246,078	....	1,218,211
Missouri	116,284	17,061	4,014	13,439	171,943	....	1,662,749
Iowa	84,598	1,200	80	2,182	70,680	....	202,533
Wisconsin	295,927	....	100	834	661,969	....	57,506
California	2,038	....	....	....	....	....	2,500
Minnesota	2,069	....	....	....	2,950	....	....
Oregon	373	....	....	....	....	....	....
Utah	4,288	....	....	5	....	....	1,304
New Mexico	....	....	....	....	....	....	6,031
Total	13,605,384	62,182	13,059	567,749	32,759,263	318,644	27,525,545

Table B.—*Cotton Goods.*

State.	Capital Invested.	Bales of Cotton.	Tons of Coal.	Value of all Raw Material.	Number of Hands Employed.		Entire Wages per Month.		Average Wages per Month.		Value of entire Product.	Yards of Sheeting, &c.	Sundries.
					Males.	Females.	Males.	Females.	Males.	Females.			
	Dollars			Dollars.			Dollars.	Dollars.	Dol. C.	Dol. C.	Dollars.		
Maine	3,329,700	31,531	2,921	1,573,110	780	2,959	22,895	35,973	29 35	12 15	2,596,356	32,852,556	.....
New Hampshire	10,950,500	83,026	7,679	4,839,429	2,911	9,211	75,713	124,131	25 45	13 47	8,830,619	113,106,247	149,700 pounds of yarn.
Vermont	202,500	2,243	..	114,415	94	147	1,460	1,861	15 55	12 67	196,100	1,651,000	53,050 „ „
Massachusetts	28,455,630	223,607	46,545	11,289,309	9,293	19,437	212,892	264,514	23 01	13 55	19,712,461	298,751,392	353,660 „ „
Rhode Island	6,675,000	50,713	13,116	3,484,579	4,959	5,916	92,282	76,656	18 61	12 95	6,447,120	96,725,612	1,902,980 thread and yarn.
Connecticut	4,219,100	39,483	2,866	2,500,062	2,708	3,478	51,679	41,060	19 08	11 81	4,257,522	51,780,700	950,000 pounds of yarn.
New York	4,176,920	37,778	1,539	1,985,973	2,632	3,688	48,244	35,699	18 33	9 68	3,591,989	44,901,475	2,180,600 „ „
New Jersey	1,483,500	14,437	4,467	666,645	616	1,096	11,078	10,487	17 98	9 56	1,109,524	8,122,580	2,000,000 „ „
Pennsylvania	4,528,925	44,162	24,189	3,152,630	3,564	4,099	63,642	40,656	17 86	9 91	5,322,262	45,746,790	5,308,561 „ „
Delaware	460,100	4,730	1,920	312,068	413	425	6,326	4,926	15 55	11 59	538,439	3,521,636	533,000 „ „
Maryland	2,236,000	23,325	2,212	1,165,579	1,008	2,014	15,546	19,108	15 42	9 53	2,120,504	27,883,923	46,000 „ „
Virginia	1,908,900	17,785	4,805	828,375	1,275	1,688	12,983	11,791	10 15	6 98	1,486,384	15,640,107	1,755,915 „ „
North Carolina	1,058,800	13,617	...	531,903	443	1,177	5,153	7,216	11 66	6 13	831,342	2,470,110	2,267,000 „ „
South Carolina	857,200	9,929	...	295,971	399	620	5,565	5,151	13 94	8 30	748,338	6,563,737	1,348,343 „ „
Georgia	1,736,156	20,230	1,000	900,419	873	1,399	12,725	10,352	14 57	7 39	2,135,044	7,209,292	4,198,351 „ „
Florida	80,000	600	...	30,000	28	67	900	335	32 14	5 00	49,920	624,000	.....
Alabama	651,900	5,208	...	237,081	346	369	4,053	2,946	11 71	7 98	382,260	3,081,000	790,000 „ „
Mississippi	38,000	430	...	21,500	19	17	270	101	14 21	5 34	30,500	...	171,000 „ „
Louisiana	...	...	...	...	...	...	...	...	...	...	...	...	.....
Texas	...	...	...	...	...	...	...	...	...	...	...	...	.....
Arkansas	16,500	170	...	8,975	13	18	190	106	14 61	5 88	16,637	...	81,250 „ „
Tennessee	669,600	6,411	3,010	297,500	310	581	3,394	3,730	10 95	6 42	510,624	363,250	2,326,250 „ „
Kentucky	239,000	3,760	720	180,907	181	221	2,707	2,070	14 62	9 36	273,439	1,003,000	725,000 „ „
Ohio	297,000	4,270	2,152	237,060	132	269	2,191	2,534	16 60	9 05	394,700	280,000	433,000 „ „
Michigan	...	...	...	...	...	...	...	...	...	...	...	...	.....
Indiana	43,000	675	300	28,220	38	57	495	386	13 00	6 77	44,200	...	300,000 „ „
Illinois	...	...	...	...	...	...	...	...	...	...	...	...	.....
Missouri	102,000	2,160	1,658	86,466	75	80	820	800	10 94	10 00	142,900	...	13,260 bales of batting.
Iowa	...	...	...	...	...	...	...	...	...	...	...	...	.....
Wisconsin	...	...	...	...	...	...	...	...	...	...	...	...	.....
California	...	...	...	...	...	...	...	...	...	...	...	...	.....
District of Columbia	85,000	960	...	67,000	41	103	575	825	14 02	8 01	100,000	1,400,000	.....
Total	74,501,031	641,240	121,099	34,835,056	33,150	59,136	653,778	703,414	...	...	61,869,184	763,678,407	27,873,600 lbs. and bales.

Table C.—*Woollen Goods.*

State.	Capital Invested.	Pounds of Wool used.	Tons of Coal.	Value of all Raw Material.	Number of Hands Employed.		Entire Wages per Month.		Average Wages per Month.		Value of Entire Products.	Yards of Cloth Manufactured.	Sundries.
					Males.	Females.	Males.	Females.	Males.	Females.			
	Dollars.			Dollars.			Dollars.	Dollars.	Dol. C.	Dol. C.	Dollars.		
Maine	467,600	1,438,434	...	495,940	310	314	6,998	3,697	22 57	11 77	753,300	1,023,020	1,200 pounds of yarn.
New Hampshire	2,437,700	3,604,103	3,600	1,267,329	926	1,201	21,177	17,451	22 84	14 51	2,127,745	9,712,840	165,200 „ „
Vermont	886,300	2,328,100	...	830,684	683	716	16,712	8,388	24 60	11 80	1,579,161	2,830,400	.....
Massachusetts	9,089,342	22,229,952	15,400	8,671,671	6,167	4,963	141,533	70,581	22 95	14 22	12,770,565	25,865,658	749,550 „ „
Rhode Island	1,013,000	4,103,370	2,032	1,463,900	987	771	20,431	11,708	20 70	15 18	2,381,825	8,612,400	46,000 „ „
Connecticut	3,773,950	9,414,100	7,912	3,225,709	2,907	2,581	70,141	33,216	20 12	13 25	6,465,216	9,408,777	.....
New York	4,459,370	12,538,786	...	3,838,292	4,262	2,412	85,147	28,377	21 46	11 41	7,030,604	7,924,252	261,700 „ „
New Jersey	494,274	1,510,219	1,889	548,367	411	487	10,367	4,192	25 02	8 59	1,164,446	771,100	350,000 „ „
Pennsylvania	3,005,064	7,560,379	10,777	3,282,718	3,490	2,236	67,138	23,279	19 20	10 40	5,321,866	10,099,234	1,941,621 „ „
Delaware	148,500	393,000	45	204,172	122	18	2,293	312	18 79	17 30	251,010	152,000	.....
Maryland	244,000	430,300	100	165,568	262	100	4,875	1,189	18 60	11 89	295,140	373,100	.....
Virginia	392,640	1,554,110	357	488,899	478	190	8,688	1,883	18 15	9 90	841,013	2,037,025	398,705 „ „
North Carolina	18,000	30,000	...	13,950	15	15	270	105	18 00	7 00	23,750	34,000	.....
South Carolina	...	...	...	...	...	...	...	...	...	...	...	...	.....
Georgia	68,000	153,816	...	30,392	40	38	1,099	536	27 47	14 10	88,750	340,660	.....
Florida	...	...	...	...	...	...	...	...	...	...	...	...	.....
Alabama	...	...	...	...	...	...	...	...	...	...	...	...	.....
Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	.....
Louisiana	...	...	...	...	...	...	...	...	...	...	...	...	.....
Texas	8,000	30,000	...	10,000	4	4	80	80	20 00	20 00	15,000	14,000	4,000 blankets.
Arkansas	...	...	...	...	...	...	...	...	...	...	...	...	.....
Tennessee	10,900	6,200	...	1,675	15	2	265	12	17 66	4 00	6,316	...	2,220 hats.
Kentucky	249,820	673,900	...	205,287	256	62	3,919	689	15 29	11 11	318,819	878,034	.....
Ohio	870,220	1,657,726	2,110	578,423	903	298	18,191	3,250	20 14	10 44	1,111,027	1,374,087	65,000 pounds of yarn.
Michigan	94,000	162,250	...	43,402	78	51	1,689	585	21 65	11 47	90,242	141,570	.....
Indiana	171,545	413,350	90	120,486	189	57	4,122	630	21 81	11 05	205,802	235,500	104,000 „ „
Illinois	154,500	396,964	987	115,367	124	54	2,728	676	22 00	12 52	206,572	306,995	137,000 „ „
Missouri	20,000	80,000	1,071	16,000	15	10	480	65	32 00	6 50	56,000	12,000	6,000 pairs blankets.
Iowa	10,000	14,500	...	3,500	7	...	78	...	11 42	...	13,000	14,000	.....
Wisconsin	31,225	134,200	...	32,630	25	...	562	...	22 45	...	87,992	36,000	74,350 pounds of yarn.
California	...	...	...	...	...	...	...	...	...	...	...	...	.....
District of Columbia	700	5,000	...	1,630	2	...	60	...	30 00	...	2,400	10,000	.....
Total	28,118,650	70,862,829	46,270	25,755,988	22,678	16,574	480,039	210,901	...	...	43,207,555	82,206,652	4,294,326 pounds of yarn.

TABLE D.—*Pig Iron.*

STATE.	Capital Invested.	Tons of Ore used.	Tons of Mineral Coal.	Bushels of Coke and Charcoal.	Value of Raw Material, Fuel, &c.	Number of Hands Employed.		Entire Wages per Month.		Average Wages per Month.		Tons of Pig Iron made.	Value of other Products.	Value of Entire Products.
						Males.	Females.	Males.	Females.	Males.	Females.			
	Dollars.				Dollars.			Dollars.	Dollars.	Dol. C.	Dol. C.		Dollars.	Dollars.
Maine	214,000	2,907	...	213,970	14,939	71	...	1,562	...	22 00	...	1.484	...	36,616
New Hampshire	2,000	500	...	50,000	4,900	10	...	180	...	18 00	...	200	...	6,000
Vermont	62,500	7,676	150	326,437	40,175	100	...	2,208	...	22 08	...	3,200	...	68,000
Massachusetts	469,000	27,900	...	1,855,000	185,741	263	...	7,238	...	27 50	...	12,287	...	295,123
Rhode Island	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Connecticut	225,600	35,450	...	2,870,000	289,225	148	...	3,967	...	26 80	...	13,420	20,000	415,600
New York	605,000	46,385	20	3,000,074	321,027	505	...	12,625	...	24 96	...	23,022	12,800	597,920
New Jersey	967,000	51,266	20,865	1,621,000	332,707	600	...	12,720	...	21 20	...	24,031	...	560,544
Pennsylvania	8,570,425	877,283	316,060	27,505,186	3,732,427	9,285	9	201,039	46	21 15	...	285,702	40,000	6,071,513
Delaware	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maryland	1,420,000	99,866	14,088	3,707,500	560,725	1,370	...	27,595	...	21 27	...	43,641	96,000	1,056,400
Virginia	513,800	67,319	39,982	1,311,000	158,307	1,115	14	14,232	96	12 67	6 86	22,163	...	521,924
North Carolina	25,000	900	...	150,000	27,900	26	5	208	22	8 00	4 40	400	...	12,500
South Carolina	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Georgia	26,000	5,189	...	430,000	25,840	135	3	2,355	15	17 44	5 00	900	28,000	57,300
Florida	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alabama	11,000	1,838	...	145,000	6,770	40	...	700	...	17 50	...	522	5,000	22,500
Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Louisiana	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Texas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arkansas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tennessee	1,021,400	88,810	177,167	160,000	254,900	1,713	109	21,958	558	12 82	5 10	30,420	41,900	676,100
Kentucky	924,700	72,010	...	4,576,269	260,152	1,845	10	37,335	47	20 23	4 70	24,245	10,000	604,037
Ohio	1,503,000	140,610	21,730	5,428,800	630,037	2,415	...	59,129	...	24 48	...	52,658	...	1,255,850
Michigan	15,000	2,700	...	185,000	14,000	25	...	875	...	35 00	...	660	6,000	21,000
Indiana	72,000	5,200	...	310,000	24,400	88	...	2,290	...	26 00	...	1,850	...	58,000
Illinois	65,000	5,500	...	170,000	15,500	150	...	3,310	...	22 06	...	2,700	...	70,200
Missouri	619,000	37,000	55,180	...	97,367	334	...	8,112	...	24 28	...	19,250	...	314,600
Iowa	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wisconsin	15,000	3,000	...	150,000	8,250	60	...	1,800	...	30 00	...	1,000	...	27,000
California	...	...	...	...	...	...	...	...	...	...	...	...	...	...
District of Columbia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	17,346,425	1,579,309	645,242	54,165,236	7,005,289	20,298	150	421,435	784	...	...	564,755	259,700	12,748,777

TABLE E.—*Castings.*

STATE.	Capital Invested.	Tons of Pig Iron.	Tons of Old Metal.	Tons of Ore.	Tons of Mineral Coal.	Bushels of Coke and Charcoal.	Value of Raw Material, Fuel, &c.	Number of Hands Employed.		Average Wages per Month.		Tons of Castings made.	Value of other Products.	Value of entire Products.
								Males.	Females.	Males.	Females.			
	Dollars.						Dollars.			Dol. C.	Dol. C.		Dollars.	Dollars.
Maine	150,100	3,591	245	...	1,319	14,000	112,570	243	1	29 00	5 00	3,691	...	265,000
New Hampshire	232,700	5,673	500	...	1,680	20,500	177,060	374	...	33 05	...	5,764	27,700	371,710
Vermont	290,720	5,279	274	...	1,066	198,400	160,603	381	...	28 27	...	5,000	87,770	460,831
Massachusetts	1,499,050	31,134	3,361	...	12,401	3,500	1,057,904	1,596	...	30 90	...	32,074	...	2,235,635
Rhode Island	428,800	8,918	...	...	4,670	4,000	258,267	800	...	29 63	...	8,558	119,500	728,705
Connecticut	580,800	11,396	337	...	7,592	30,600	351,369	942	7	27 02	8 00	11,210	70,000	981,400
New York	4,622,482	108,945	3,212	...	22,755	181,190	2,393,768	5,925	...	27 49	...	104,588	...	5,921,980
New Jersey	593,250	10,666	350	...	5,444	175,800	301,048	803	...	24 09	...	10,259	...	686,430
Pennsylvania	3,422,924	69,501	819	...	49,228	276,855	2,372,467	4,782	1	27 55	6 00	57,810	661,160	5,354,881
Delaware	373,500	4,440	...	...	4,967	...	153,852	250	...	23 36	...	3,630	55,000	267,462
Maryland	359,100	7,220	...	...	5,000	30,000	259,190	761	...	27 50	...	6,244	80,000	685,000
Virginia	471,160	7,114	205	...	7,878	71,600	297,014	810	9	19 91	9 44	5,577	...	674,416
North Carolina	11,500	192	...	...	...	6,375	8,341	15	...	23 46	...	172	...	12,867
South Carolina	185,700	169	...	2,800	...	405,560	29,128	153	2	13 59	4 00	1,286	...	87,683
Georgia	35,000	440	...	...	100	9,800	11,950	39	...	27 43	...	415	...	46,200
Florida	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alabama	216,625	2,348	...	...	...	31,300	102,085	212	...	30 05	...	1,915	...	271,126
Mississippi	100,000	1,197	...	...	248	92,000	50,370	112	...	37 91	...	924	2,800	117,400
Louisiana	255,000	1,660	...	...	3,205	...	75,300	347	...	35 60	...	1,570	4,000	312,500
Texas	16,000	250	...	...	250	...	8,400	35	...	43 43	...	200	15,000	55,000
Arkansas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tennessee	139,500	1,682	...	5,050	24,690	13,200	90,035	261	8	17 96	4 50	3,384	...	264,325
Kentucky	502,200	9,731	...	...	2,649	432,750	295,533	558	20	24 89	4 15	5,888	...	744,316
Ohio	2,063,650	37,555	1,843	2,000	30,006	355,120	1,199,790	2,758	...	27 32	...	37,399	208,700	3,069,350
Michigan	195,450	2,494	...	...	901	16,200	91,865	337	...	28 68	...	2,070	25,616	279,697
Indiana	82,900	1,968	5	...	132	29,600	66,918	143	...	25 74	...	1,757	...	149,430
Illinois	260,400	4,818	50	...	1,412	12,500	172,330	332	...	28 50	...	4,160	89,250	441,185
Missouri	187,000	5,100	200	...	2,598	...	133,114	297	...	19 63	...	5,200	...	336,495
Iowa	5,500	81	...	...	...	200	2,524	17	...	32 35	...	71	2,600	8,500
Wisconsin	116,350	1,371	15	...	595	2,700	86,930	228	...	26 73	...	1,342	64,025	216,195
California	5,000	75	...	...	25	...	8,530	3	...	23 33	...	75	...	20,740
District of Columbia	14,000	545	...	...	80	...	18,100	27	...	27 05	...	512	11,000	41,696
Total	17,416,361	345,553	11,416	9,850	190,891	2,413,750	10,346,355	23,541	48	...	...	322,745	1,524,121	25,108,155

TABLE F.—*Wrought Iron.*

STATE.	Capital Invested.	Tons of Pig Metal.	Tons of Blooms used.	Tons of Ore used.	Tons of Mineral Coal.	Bushels of Coke and Charcoal.	Value of Raw Material used.	Number of Hands Employed.		Average Wages per Month.		Tons of Wrought Iron made.	Value of other Products.	Value of entire Products.
								Males.	Females.	Males.	Females.			
	Dollars.						Dollars.			Dol. C.	Dol. C.		Dollars.	Dollars.
Maine	...	...	...	...	...	...	...	...	...	...	...	...	...	...
New Hampshire	4,000	145	...	...	...	50,000	5,600	6	...	32 00	...	110	...	10,400
Vermont	62,700	750	525	2,625	...	337,000	66,194	57	...	31 05	...	2,045	...	163,986
Massachusetts	610,300	7,030	...	...	11,022	78,500	221,194	260	...	22 50	...	6,720	...	428,320
Rhode Island	208,000	3,000	...	...	6,000	...	111,750	220	...	26 00	...	2,650	...	222,400
Connecticut	529,500	7,081	1,644	...	5,062	783,600	358,780	374	...	31 59	...	6,325	5,000	667,560
New York	1,131,300	8,530	...	44,642	13,908	5,554,150	838,314	1,037	...	26 00	...	13,636	195,000	1,423,968
New Jersey	1,016,843	10,430	...	14,549	4,507	1,994,180	320,950	593	...	27 78	...	8,162	...	629,273
Pennsylvania	7,620,066	163,702	20,405	...	325,967	3,939,998	5,488,391	6,764	7	27 68	7 50	182,506	219,500	8,902,907
Delaware	15,000	510	60	...	...	228,000	19,500	50	...	24 19	...	550	...	55,000
Maryland	780,650	10,172	3,389	...	10,455	246,000	439,511	568	...	23 33	...	10,000	...	771,431
Virginia	791,211	17,296	2,500	...	66,515	103,000	591,448	1,295	...	23 62	...	15,328	...	1,254,995
North Carolina	103,000	...	...	4,650	...	357,900	28,114	173	14	10 37	5 28	850	...	66,980
South Carolina	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Georgia	9,200	100	...	...	...	76,600	5,986	26	1	11 35	5 00	90	...	15,384
Florida	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alabama	2,500	120	...	...	...	30,000	3,000	14	...	20 00	...	100	...	7,500
Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Louisiana	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Texas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arkansas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tennessee	755,050	11,696	325	9,151	62,038	...	385,616	731	55	15 20	5 00	10,348	38,000	670,618
Kentucky	176,000	2,000	1,600	...	...	280,000	180,800	183	...	32 06	...	3,070	...	299,700
Ohio	620,800	13,675	2,900	...	22,755	466,900	604,493	708	...	33 61	...	14,416	...	1,076,192
Michigan	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Indiana	17,000	50	...	3,150	...	85,000	4,425	22	2	27 45	4 00	175	...	11,760
Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Missouri	42,100	1,204	...	...	9,834	...	24,509	101	...	30 00	...	963	...	68,700
Iowa	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wisconsin	...	...	...	...	...	...	...	...	...	...	...	...	...	...
California	...	...	...	...	...	...	...	...	...	...	...	...	...	...
District of Columbia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	14,495,220	251,491	33,344	78,787	538,063	14,510,828	9,698,109	13,178	79	...	...	278,044	458,300	16,747,074

TABLE G.—*Number of Establishments in Operation.*

STATES.	Cotton.	Woollen.	Castings.	Pig Iron.	Wrought Iron.
Maine	12	36	25	1	....
New Hampshire	44	61	26	1	2
Vermont	9	72	26	3	8
Massachusetts	213	119	68	6	6
Rhode Island	158	45	20	....	1
Connecticut	128	149	60	13	18
New York	86	249	323	18	60
New Jersey	21	41	45	10	53
Pennsylvania	208	380	320	180	131
Delaware	12	8	13	....	2
Maryland	24	38	16	18	17
Virginia	27	121	54	29	39
North Carolina	28	1	5	2	19
South Carolina	18	....	6	....	....
Georgia	35	3	4	3	3
Florida	....	....	....	....	....
Alabama	12	....	10	3	1
Mississippi	2	....	8	....	....
Louisiana	....	....	8	....	....
Texas	....	1	2	....	....
Arkansas	3	....	....	....	....
Tennessee	33	4	16	23	42
Kentucky	8	25	20	21	4
Ohio	8	130	183	35	11
Michigan	....	15	63	1	....
Indiana	2	33	14	2	3
Illinois	....	16	29	2	....
Missouri	2	1	6	5	2
Iowa	....	1	3	....	....
Wisconsin	....	9	15	1	....
California	....	....	1	....	....
District of Columbia	1	1	2	....	....
Total	1,094	1,559	1,391	377	422

MISCELLANEOUS.

Abstract of the Population of Saxony in the Years 1834-7-40-3-6-9, *from the Statistical Department of the Minister of the Interior.—Translated and Compiled by* A. S. Oliver Massey, Esq.

Years.	Sex.	Inhabited Houses.	Families.	Population.	Triennial Increase.	Triennial Increase per Cent.	Classification of the Population.																	
							Condition.					Creed.						Age.		Itinerant Population.	Blind.	Deaf and Dumb.	Insane.
							Children and Unmarried.	Married, living together.	Divorced.	Separated.	Widowed.	Lutherans.	Reformers.	Roman Catholics.	German Catholics.	Greek Catholics.	Jews.	Under 14.	Above 14.				
1834	Male	...	...	775,244	...	...	464,612	...	1,430	5,451	25,939	...	...	...	...	...	...	261,173	514,071	...	176	555	...
	Fem.	...	...	820,424	...	...	470,285	...	2,368	5,762	64,197	...	...	...	...	...	...	264,153	556,371	...	148	455	...
	Total	209,122	351,723	1,595,668	...	...	934,897	277,812	3,808	11,213	90,136	1,565,170	1,620	27,938	...	90	850	525,226	1,070,442	...	324	1,010	...
1837	Male	...	...	804,802	28,758	...	424,965	...	1,497	5,491	26,280	...	...	...	...	...	...	264,549	539,453	...	189	665	...
	Fem.	...	...	848,112	27,688	...	493,871	...	2,398	5,419	60,655	...	...	...	...	...	...	269,372	578,380	...	237	514	...
	Total	212,857	368,122	1,652,114	56,446	3·53	978,836	285,769	3,895	10,910	86,935	1,620,393	1,803	28,998	...	72	848	533,921	1,117,833	...	426	1,179	...
1840	Male	...	...	829,655	25,653	...	501,917	...	1,602	5,213	27,198	812,610	976	15,493	...	79	497	268,380	561,275	...	579	658	...
	Fem.	...	...	876,621	28,509	...	505,445	...	2,545	5,466	69,440	860,700	879	14,611	...	60	371	274,299	602,322	...	621	514	...
	Total	212,144	384,760	1,706,276	54,162	3·27	1,007,362	293,725	4,147	10,679	96,638	1,673,310	1,855	30,104	...	139	868	542,679	1,163,597	...	1,200	1,172	...
1843	Male	...	...	855,620	25,965	...	517,699	...	1,634	5,692	27,856	838,171	1,124	15,735	...	78	512	278,698	576,922	...	566	644	266
	Fem.	...	...	902,180	25,559	...	521,249	...	2,667	5,699	69,826	886,171	954	14,641	...	49	370	283,627	618,553	...	563	512	278
	Total	216,020	385,108	1,757,800	51,524	3·02	1,038,948	302,739	4,301	11,391	97,682	1,724,342	2,078	30,376	...	127	882	562,325	1,195,475	...	1,129	1,156	544
1846	Male	...	...	895,918	40,298	...	541,594	...	1,701	8,131	29,730	876,279	1,371	16,855	751	73	589	297,455	598,463	21,215	656	549	1,094
	Fem.	...	...	941,515	39,335	...	541,882	...	2,853	6,268	74,750	922,842	1,198	15,689	347	40	399	301,718	638,797	22,671	715	496	1,019
	Total	220,255	403,518	1,836,433	79,633	4·47	1,083,476	314,762	4,554	14,399	104,480	1,799,121	3,569	32,544	1,098	113	988	599,173	1,237,260	43,886	1,371	1,045	2,113
1849	Male	...	...	923,264	27,346	...	558,756	...	1,764	8,860	31,360	903,220	1,313	17,041	1,048	58	584	296,085	627,179	23,789	773	662	1,414
	Fem.	...	...	971,167	29,652	...	558,989	...	3,138	8,661	77,855	952,022	1,268	16,684	724	31	438	299,925	671,242	25,428	790	553	1,339
	Total	223,368	420,125	1,894,431	56,998	3·16	1,117,745	322,524	4,892	17,521	109,215	1,855,242	2,581	33,725	1,772	89	1,022	596,010	1,298,421	49,217	1,563	1,215	2,753

The Population of Switzerland, in a Religious Point of View.—By Professor Baup. *From Evangelical Christendom*, vol. vi., p. 71.

Total Population	From 1803 to 1811, 1,435,000.		In 1837 and 1838, 2,190,258.		Census of 1850, 2,392,740.			Total Population in 1850.
	Catholics.	Reformed.	Catholics.	Reformed.	Catholics.	Reformed.	Jews.	
Zurich	900	174,100	1,000	230,576	6,690	243,928	80	250,678
Berne	450	182,500	53,000	354,913	54,044	403,769	480	458,225
Lucerne	102,972	80	124,000	521	131,280	1,563	...	132,846
Uri	11,121	...	13,519	...	14,493	12	...	14,505
Schwytz	40,000	6	40,650	...	44,013	155	...	44,168
Unterwald, Haut	11,300	... }	22,571	...	13,783	16	...	13,799
„ Bas...	11,294	... }			11,327	12	...	11,339
Glaris	3,000	16,000	4,000	25,348	3,932	26,281	...	30,213
Zug	13,000	...	15,655	...	17,336	125	...	17,469
Fribourg	60,013	6,190	82,145	9,000	87,753	12,133	5	99,890
Soleure	42,924	3,403	57,196	6,000	61,556	8,097	21	69,674
Bâle Ville ... }	2,746	37,486	6,000	59,424	{ 5,508	24,083	107	29,698
„ Campagne }					{ 9,052	38,818	15	47,885
Schafhouse	262	24,824	300	30,825	1,411	33,880	9	35,300
Appenzell, R. Ext.	...	38,351	...	41,080	875	42,746	...	43,621
„ R. Inter.	10,211	...	10,350	...	11,230	42	...	11,272
St. Gall	81,309	48,957	100,000	58,855	105,370	64,192	63	169,625
Grisons	26,700	41,700	32,455	52,051	38,039	51,855	1	89,895
Argovie	61,600	70,149	88,500	94,255	91,096	107,194	1,562	199,852
Thurgovie	17,032	60,059	19,998	62,126	21,921	66,984	3	88,908
Tessin	89,000	...	113,923	(?)	117,707	50	2	117,759
Vaud	2,000	143,000	3,400	180,182	6,962	192,225	388	199,575
Valais	...	...	75,798	300	81,128	430	1	83,812
Neufchâtel	...	...	2,400	56,216	5,570	64,952	231	70,753
Genève	...	...	22,000	36,666	29,764	34,212	170	64,146
	587,834	846,805	888,860	1,300,036	971,820	1,417,474	3,146	...
Proportion	41 in 100	59 in 100	$40\frac{6}{10}$ in 100	$59\frac{4}{10}$ in 100	$40\frac{6}{10}$ in 100	$59\frac{3}{10}$ in 100	$\frac{1}{10}$ in 100	...

In every 1,000 persons, 593 would be Reformed, 406 Catholic, and 1 a Jew; 3 Reformed to 2 Catholics. The proportion borne by the Reformed to the Catholic population remains much as it was, notwithstanding the accession of the Valais, Neufchâtel, and Geneva, in 1815, and the various degrees in which the population of the different cantons has increased. The Catholic population has decreased, and the Reformed increased, in the cantons of Berne, Glaris, St. Gall, and Argovie; while, on the contrary, the Reformed has decreased, and the Catholic increased, in the Grisons, Thurgovie, the city and canton of Bâle, Neufchâtel, and Geneva, especially in the latter canton.

Diminution of Roman Catholics and Increase of the Reformed.

Berne	in 1837-38	...	13 per cent.	...	Catholics	in 1850	...	$11\frac{8}{10}$ per cent.	of the Population.
„	„	...	87 „	...	Reformers	„	...	$88\frac{2}{10}$ „	„
Glaris	in 1803-11	...	$13\frac{5}{8}$ „	...	Catholics	„	...	13 „	„
„	„	...	$86\frac{3}{8}$ „	...	Reformers	„	...	87 „	„
St. Gall	„	...	$62\frac{4}{10}$ „	...	Catholics	„	...	$62\frac{1}{10}$ „	„
„	„	...	$37\frac{6}{10}$ „	...	Reformers	„	...	$37\frac{9}{37}$ „	„
Argovie	„	...	$46\frac{8}{10}$ „	...	Catholics	„	...	46 „	„
„	„	...	$53\frac{2}{10}$ „	...	Reformers	„	...	54 „	„

Diminution of the Reformed and Increase of Roman Catholics.

Grisons	in 1803-11	...	61 per cent.	...	Reformers	in 1850	...	$57\frac{7}{10}$ per cent.	of the Population.
„	„	...	39 „	...	Catholics	„	...	$42\frac{3}{10}$ „	„
Thurgovie	„	...	$77\frac{9}{10}$ „	...	Reformers	„	...	$75\frac{3}{10}$ „	„
„	„	...	$22\frac{1}{10}$ „	...	Catholics	„	...	$24\frac{7}{10}$ „	„
Bâle	„	...	$90\frac{8}{10}$ „	...	Reformers	„	...	$81\frac{2}{10}$ „	„
„	„	...	$9\frac{2}{10}$ „	...	Catholics	„	...	$18\frac{8}{10}$ „	„
Neufchâtel	in 1837-38	...	$95\frac{9}{10}$ „	...	Reformers	„	...	92 „	„
„	„	...	$4\frac{1}{10}$ „	...	Catholics	„	...	8 „	„
Genève	„	...	$62\frac{1}{2}$ „	...	Reformers	„	...	$53\frac{1}{2}$ „	„
„	„	...	$37\frac{1}{2}$ „	...	Catholics	„	...	$46\frac{1}{2}$ „	„

At Geneva, from 1837-38 to 1850, a period of about eleven years, the Roman Catholic population increased $\frac{30}{100}$, about $\frac{3}{100}$ annually; but the Reformed scarcely $\frac{7}{100}$, being less than $\frac{1}{100}$.
The Roman Catholic population tripled itself in twenty-five years.

The *German* language is spoken by	...	$\frac{15}{20}$	... of the entire population	...	1,670,000
The *French* „	„	...	$\frac{4}{20}$ ... „	„ ...	474,000
The *Italian* „	„	about	$\frac{1}{20}$ ... „	„ ...	133,500
The *Romande* „	„	...			45,000

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

SESSION 1851–2.

Third Ordinary Meeting. Monday, 19th January, 1852.

Lieut.-Colonel W. H. Sykes, Vice-President, in the Chair.

The following Gentlemen were elected Fellows of the Society:—

De Burgh Birch, Esq. M.D. | Peter Hardy, Esq.
Harrington Tuke, Esq.

The following Papers were read:—

1. Statistics of Coffee and the Coffee Trade. By John Crawford, Esq.
2. On the Taxation and Revenue of Frankfort-on-the-Maine. By Lieut.-Colonel W. H. Sykes.

Fourth Ordinary Meeting. Monday, 16th February, 1851.

Sir C. Lemon, Bart. M.P. Vice-President, in the Chair.

The following Gentlemen were elected Fellows of the Society:—

Henry Edwards, Esq. | Henry Sutton, Esq.
Henry J. Hose, Esq. | J. Carrington Jones, Esq.
James George Stirton, Esq.

The following Gentlemen were elected Foreign Honorary Members:—

M. Ramon de la Sagra. | Dr. Friedlander.
Mr. J. G. Kennedy. | Dr. Schleisner.
M. Visschers.

The following Paper was read:—

On the Employment of Farm Schools or Agricultural Colonies, on the Continent, for the Education of Pauper, and the Reformation of Delinquent, Children. By Joseph Fletcher, Esq., Hon. Sec.

THE MARRIAGES, BIRTHS, AND DEATHS, REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND,

For the Quarter ended 30th September, 1851,

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

THIS return comprises the births and deaths registered by 2,189 registrars in all the districts of England during the Summer quarter ending September 30th, 1851; and the marriages in more than 12,000 churches or chapels, about 3,190 registered places of worship unconnected with the Established Church, and 623 superintendent registrars' offices, in the quarter that ended June 30th, 1851. The return of marriages is not complete; but the defects are inconsiderable, and approximative numbers have been supplied from the records of previous years. The marriages still exceed the average, but are less numerous than the marriages in the corresponding quarter of last year. The births continue to increase rapidly, and the mortality is below the average. The returns, therefore, present a favourable view of the state of the country.

MARRIAGES.—38,498 marriages were registered in the quarter ending June 30th. This number is less by 520 than the number registered in the Spring quarter of

1850, but more by 3,777 than the number registered in the Spring quarter of 1848. The marriages only amounted to 30,048 in the Spring quarter of 1842; they rose to 34,268 in the Spring quarter of 1844; to 37,111 in the Spring quarter of 1846; declined to 35,197 in 1847; and rose again to 39,018 in the Spring quarter of 1850. Every marriage is the establishment of a family, and is generally the result of some deliberation; it is not surprising, therefore, that the prosperity of the country and the prospects of the people should be expressed pretty accurately by the fluctuations in the marriage returns.

While the marriages increased rapidly in some parts, they were stationary or decreased in others. In London, 6,515 couples were married; which exceeds the number married in the summer of 1848 by 1,106. In Surrey, out of London, in Sussex, Kent, and Berkshire, the marriages were nearly stationary; in Hampshire they decreased. In the South Midland, the Eastern Counties, as well as in Wiltshire, Dorsetshire, and Devonshire, marriage was stationary or decreased; in Cornwall and Somersetshire there was an increase. In Gloucestershire marriage was stationary; in Herefordshire and Shropshire the numbers married were unprecedentedly low; in Staffordshire, Worcestershire, and Warwickshire—including the chief seats of the Midland iron trade—the marriages increased. The marriages rose from 383, in 1848, to 487 in Birmingham. In Leicestershire, Rutlandshire, and Lincolnshire the marriages were below, in Nottinghamshire and Derbyshire above, the average number; the excess occurring chiefly in the districts of Nottingham, Chesterfield, and Hayfield. The marriages in Cheshire and Lancashire decreased. The decrease was considerable in Liverpool, and greater still in Manchester. In the West Riding of Yorkshire there is an excess; and this is most conspicuous in Sheffield, where the marriages in the five Summer quarters ending June 1847-51 were 283, 273, 289, 339, and 404! In Leeds the marriages were 351 in the June quarter of 1848; 530 and 487 in the corresponding quarters of 1850 and 1851. In Hull the marriages increased from 147 in the June quarter of the cholera year 1849 to 175 in 1850, but have fallen again to 158. The marriages decreased in the North Riding of Yorkshire, in Northumberland and Cumberland; increased in the coal districts of Durham. In Monmouthshire and Wales marriages were less frequent than in 1850.

It has been observed that the marriages increase after a fatal epidemic; and in the present return the marriages, it is seen, have been in excess generally where cholera was most fatal in 1849.

Births.—150,584 births have been registered in the quarter ending September 30th, 1851. This is the greatest number of births ever registered in the same season of the year, and exceeds by 23,411, and 15,361, and 3,614, the births in the September quarters of 1847, 1849, and 1850. The births of 467,096 children have already been registered, and it is probable that in the year the numbers will not fall short of 600,000. The increase is distributed over all the divisions of the country except the South Midland.

Increase of Population.—While 150,584 children were born and registered in the Summer quarter, 91,600 persons died; leaving an excess of 58,984 in the population. The excess of births over deaths in the first 9 months of the present year has been 170,411, which is probably more than equivalent to the actual increase of the population.

Immigration and Emigration.—It is well known that up to a late period there has been a constant immigration of the Irish and Scotch into England, which appears to have been fully equivalent to the emigration of the English into the colonies and to foreign parts; but no exact statistical information on this subject exists.

85,603 emigrants left the ports of the United Kingdom at which there are government emigration officers in the quarter ending September 30th, 1851. This is at the rate of 930 a day; 6,510 a week. 13,963 sailed from Irish ports, 4,378 from Glasgow and Greenock, and 67,262 from three English ports; namely, 10,062 from London, 2,799 from Plymouth, and 54,401 from Liverpool. Many of the Irish emigrants are returned at Liverpool. Of the total number 68,960 emigrants sailed to the United States, 9,268 to British North America, 6,097 to the Australian

Colonies, and 1,278 to other places. The emigration has hitherto been greater in 1851 than it was in the corresponding quarters of 1850*.

The present movement of the population is in many respects remarkable. The free admission of grain, fruit, and meat, since the scarcity is equivalent to an addition to the country of a vast tract of fertile soil, which calls for cultivators, and, as the land is abroad, for agricultural emigrants who prefer the cheap though distant lands of America to the high-rented farms of Ireland, no longer possessing a monopoly for its produce in the English market. The fact deserves attention, that while the United Kingdom has been importing food in unprecedented quantities, it has been sending out swarms of emigrants from the population, of which the marriages and births promise to keep up a perpetual and increasing supply.

Prices of Provisions, &c., in the Quarter ending September 30th, 1851.

Average Price of Consols.	Average Price of Wheat per Quarter in England and Wales.	Quarters of Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Quarters of Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase).		Potatoes (York Regents) per Ton at Waterside Market, Southwark, when the supply of old Potatoes ceased.
				Beef.	Mutton.	
£96½	40*s.* 7*d.*	971,276	1,183,523	3*d.*—5*d.* Mean 4*d.*	3¾*d.*—5¾*d.* Mean 4¾*d.*	90*s.*—110*s.*

State of the Public Health.—The health of different parts of the country differs widely, and the difference is greatest in summer. In the 10 summer quarters of 1841-50 the mortality in 506 districts, comprising, when the census was taken, 10,126,886 people, was at the rate of 18·15 in 1000 *annually;* while in 117 districts, comprising the chief towns, and 7,795,882 people, the mortality was at the rate of 25 in 1000 *annually*. Thus, at least, 7 in every 25 deaths which occur in towns are the result of artificial causes. The mortality in the quarter ending September 1851 was at the rate of 23 and 17·93 in 1000 in the two groups of districts; it was a little below the average in the country, and considerably below the average in the towns. The *annual rate* of mortality per cent. in all England was, on the average of 10 summers, 2·099; in the summer quarter of 1851 it was 2·020.

Population and Mortality per cent. in the Summer Quarters of 11 *Years,* 1841-51.

	Population		Deaths in Summer Quarters.		Annual Rate of Mortality of 10 Summer Quarters, 1841-50.	Annual Rate of Mortality in the Summer Quarter, 1861.
	Enumerated June 7th, 1841.	Enumerated March 31st, 1851.	1841-50.	1851.		
In 117 Districts, comprising the chief towns	6,612,958	7,795,882	452,757	46,061	2·522	2·349
In 506 Districts, comprising chiefly small towns and country parishes	9,301,190	10,126,886	440,407	45,539	1·815	1·793
All England	15,914,148	17,922,768	893,164	91,600	2·099	2·020

* Return with which the Registrar General has been favoured by the Emigration Commissioners. At the time the Return was made it was not quite complete.

London has enjoyed a degree of health above the average in the last Summer quarter: 13,064 deaths were registered, which is a less number than was registered in the Summer quarters of 1847 and 1848, and half the number (27,172) registered in the Summer quarter of 1849, when cholera was epidemic. During the three months of July, August, and September, more people have passed through or resided temporarily in London, with its 2,361,640 inhabitants, than ever passed through any city before in the same time. The past experience of large armies, or of the pilgrimages of the east and of the middle ages, might have justified the sinister forebodings which some entertained; but the railways and the improvement in sanatory arrangements have now rendered it possible to move masses of men about in thousands and millions without danger to the public health, as the event has here proved. The deaths by violence, though less than in previous summers, were 363; 10 by poison, 35 by burns and scalds, 43 by hanging or suffocation, 89 by drowning, 156 by fractures and contusions, 21 by wounds, and 9 by other violence.

The number of suicides and murders registered in London was less in 1851 than in the summer quarters of 1847, 1848, and 1850.

	1847.	1848.	1849.	1850.	1851.
Suicides	65	59	48	58	48
Murders	5	7	3	4	4
Manslaughters	4	2	2	....	4
	74	68	53	62	56
Found drowned	35	42	38	35	31
Total	109	110	91	97	87

The deaths by poison in the Summer quarters of 1848-50, were 15, 20, 26; and instead of increasing, they were only 10 in the Summer of 1851. This decrease is highly gratifying, as it follows so immediately the recent legislation on the subject. Fractures and contusions were more fatal than in 1849-50, but not more fatal than in 1848. That other form of poisoning, intemperance in the use of alcoholic drinks, seems also to be declining; 16 deaths were ascribed to intemperance, 55 to delirium tremens, in the Summer quarter of 1850; while 13 and 35 were referred to the same causes in the Summer quarter of 1851. No person has died of hydrophobia in any Summer quarter since 1843. The deaths from that cause in the 6 years 1846-51 were 3; in the 6 years 1840-5 they amounted to 15; in the year 1839 to 4; in 1838 to 12. The decrease of this dreadful form of disease may be fairly ascribed to improved police regulations. 34 women died of metria; 55 of the other incidents of childbirth. 1,683 persons died of consumption; next to this disease in fatality, and far above all other diseases, was diarrhœa, which destroyed 1,456 lives in 3 months. Summer cholera was more fatal than it was in the Summer quarters of 1847-8; and more than twice as fatal as it was in the Summer of 1850. There has been a progressive increase of diarrhœa since the Summer of 1841, when only 228 persons died of the disease; 627 deaths were referred to typhus, 38 to remittent fever. Typhus was increasing at the close of the quarter.

MORTALITY OF THE METROPOLIS.

Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending September of the Four Years, 1848–49–50–51.

CAUSES OF DEATH.	Quarters ending Sept.			
	1848.	1849.	1850.	1851.
ALL CAUSES	13,503	27,109	11,578	12,887
SPECIFIED CAUSES	13,450	27,050	11,520	12,837
I. Zymotic Diseases	5,162	17,763	3,011	3,854
SPORADIC DISEASES.				
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	524	540	574	571
III. Tubercular Diseases	2,221	2,266	2,183	2,377
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,369	1,531	1,372	1,394
V. Diseases of the Heart and Blood-Vessels	377	455	424	418
VI. Diseases of the Lungs and of the other Organs of Respiration	973	1,211	1,032	1,163
VII. Diseases of the Stomach, Liver, and other Organs of Digestion	858	861	748	803
VIII. Diseases of the Kidneys, &c.	143	143	166	131
IX. Childbirth, Diseases of the Uterus, &c.	103	118	116	119
X. Rheumatism, Diseases of the Bones, Joints, &c.	75	84	100	94
XI. Diseases of the Skin, Cellular Tissue, &c	27	15	16	20
XII. Malformations	44	49	43	37
XIII. Premature Birth & Debility	254	364	370	406
XIV. Atrophy	339	458	361	416
XV. Age	399	558	439	502
XVI. Sudden*	111	184	115	85
XVII. Violence, Privation, Cold, and Intemperance	471	450	450	447
I. Small Pox	435	78	109	243
Measles	154	274	178	260
Scarlatina	1,560	386	316	291
Hooping Cough	340	428	300	360
Croup	63	76	57	46
Thrush	77	67	59	74
Diarrhœa	1,048	2,457	1,161	1,456
Dysentery	171	208	73	67
Cholera	153	12,847	87	188
Influenza	7	9	9	7
Purpura and Scurvy	13	13	9	14
Ague	8	6	7	5
Remittent Fever	18	24	17	38
Infantile Fever†	8	15	8	17
Typhus	882	710	474	627
Metria, or Puerperal Fever, see Childbirth	52	33	33	34
Rheumatic Fever, see Rheumatism	15	13	16	19
Erysipelas	128	99	65	76
Syphilis	25	17	33	23
Noma or Canker, see Mortification	5	3	..	9
Hydrophobia	..	..	..	..
II. Hæmorrhage	54	56	60	48
Dropsy	193	203	191	177
Abscess	21	22	17	23
Ulcer	15	12	15	10
Fistula	3	5	4	7
Mortification	39	33	39	47
Cancer	189	200	238	245
Gout	10	9	10	14
III. Scrofula	86	85	80	95
Tabes Mesenterica	250	282	238	251
Phthisis or Consumption	1,534	1,506	1,508	1,683
Hydrocephalus	351	393	357	348
IV. Cephalitis	125	134	131	132
Apoplexy	282	282	281	293
Paralysis	213	248	245	239
Delirium Tremens	33	61	55	35
Chorea	3	..	1	2
Epilepsy	70	101	68	77
Tetanus	3	7	4	1
Insanity	16	20	20	33
Convulsions	466	512	422	444
Disease of Brain, &c.	158	166	145	138
V. Pericarditis	30	22	25	27
Aneurism	19	19	20	21
Disease of Heart	328	414	379	370
VI. Laryngitis	36	33	43	28
Bronchitis	357	422	380	469
Pleurisy	22	30	24	33
Pneumonia	388	587	439	478
Asthma	64	62	83	66
Disease of Lungs, &c	106	77	63	89
VII. Teething	117	153	121	132
Quinsey	14	20	15	14
Gastritis	24	22	32	34
Enteritis	166	135	106	114
Peritonitis	62	48	57	44
Ascites	31	29	35	35
Ulceration (of Intestines, &c.)	30	31	28	32
Hernia	25	28	21	33
Ileus	38	40	33	33
Intussusception	17	15	8	12
Stricture of the Intestinal Canal	9	6	13	10
Dis. of Stomach, &c.	75	78	53	82
Disease of Pancreas	..	..	1	..
Hepatitis	63	57	47	46
Jaundice	40	41	52	41
Disease of Liver	144	156	125	139
Disease of Spleen	3	2	1	2
VIII. Nephritis	7	7	10	7
Nephria (or Bright's Disease)	39	30	33	25
Ischuria	3	4	3	1
Diabetes	7	8	9	10
Stone	9	8	6	6
Cystitis	8	10	8	5
Stricture of Urethra	12	12	16	11
Dis. of Kidneys, &c.	58	64	81	66
IX. Paramenia	..	2	2	1
Ovarian Dropsy	12	14	20	15
Childbirth, see Metria	57	61	57	55
Dis. of Uterus, &c.	34	41	37	48
X. Arthritis	..	3	1	2
Rheumatism	45	44	53	46
Disease of Joints, &c.	30	37	46	46
XI. Carbuncle	6	2	9	4
Phlegmon	8	7	3	6
Disease of Skin, &c.	13	6	4	10
XVII. Intemperance	15	15	16	13
Privation	2	12	2	3
Want of Breast Milk, see Privation & Atrophy	59	69	57	67
Neglect	4	3	1	..
Cold, see Privation	..	1	..	1
Poison	15	20	26	10
Burns and Scalds	31	32	26	35
Hanging, &c.	36	35	53	43
Drowning	116	96	94	89
Fractures and Contusions	156	131	137	156
Wounds	26	18	19	21
Other Violence	11	18	19	9
Causes not specified	53	59	58	50

* Under the head of "sudden deaths," are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

† In the years previous to 1848, "Worms" and "Infantile Fever" were classed together. The former, of very rare occurrence, is now placed to diseases of stomach, &c.

METEOROLOGICAL TABLE for the Quarter ending September 30, 1851.

NAMES OF THE PLACES.	Mean Pressure of Dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean daily Range of Temperature.	Mean monthly Range of Temp.	Range of Temperature in the Quarter.	Mean Temperat. of Evaporation.	Mean Temperature of the Dew Point.	WIND. Mean estimated Strength.	WIND. General Direction.	Mean Amount of Cloud.	RAIN. No. of days on which it fell.	RAIN. Amount collected.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional weight required to saturate a cubic Foot of Air.	Mean Degree of Humidity.	Mean whole amount of Water in a Vertical Column of Atmosphere.	Mean Weight of a Cubic Foot of Air.	Height of Cistern of Baromr. above level of the Sea.
	In.	°	°	°	°	°	°	°	°					In.	Gr.	Gr.		In.	Gr.	Feet.
Jersey	29·651	61·2	85·0	42·0	18·1	34·0	43·0	58·0	55·5	1·8	N.W., S.W., & N.E.	3·3	27	3·65	5·1	1·1	0·822	6·3	528	75
Guernsey	29·619	60·7	76·0	48·0	9·6	20·8	28·0	58·2	56·5	1·4	N.W., S.W., & N.E.	4·1	26	3·22	5·2	0·82	0·862	6·0	527	123
Helston	29·652	59·8	79·0	42·0	17·5	36·7	37·0	56·6	54·6	1·4	N.W., S.W., & N.E.	4·9	32	7·23	5·0	0·86	0·852	6·1	529	106
Falmouth	..	59·9	81·0	39·0	19·9	38·7	42·0	..	..	1·3	N.W. & E.	6·6	40	8·25	..	..	..	..	..	120
Truro	29·637	60·4	79·0	34·0	17·5	38·7	45·0	56·8	53·9	0·5	N.N.W. & W.S.W.	5·4	32	6·87	4·8	1·2	0·806	5·9	530	55
Torquay	..	59·8	75·0	45·0	12·6	25·3	30·0	54·6	51·0	2·5	N. & S.W.	..	28	5·05	4·4	1·5	0·740	5·4	..	160
Exeter	29·611	60·4	79·0	38·7	18·3	35·6	40·3	56·2	52·9	1·8	W. & Var.	2·9	29	5·20	4·7	1·3	0·788	5·7	529	140
Cowes, Isle of Wight	29·583	61·0	78·0	39·0	13·9	32·9	39·0	57·6	55·0	1·7	W.S.W. & N.E.	5·0	20	4·37	5·0	1·1	0·820	6·3	528	60
Chichester	29·712	59·6	80·0	39·0	16·7	36·7	41·0	..	51·4	..	N.N.W. & S.W.	..	..	3·70	..	..	..	5·9	..	23
Southampton	..	60·4	78·0	40·4	..	..	37·6	56·1	52·8	..	..	..	28	4·35	4·6	1·3	0·776	6·1	..	60
Uckfield	29·628	61·9	88·0	35·0	22·6	43·3	53·0	56·9	53·2	0·8	W. & N.E.	6·0	25	5·27	4·7	1·5	0·747	5·8	528	180
Lewisham	29·660	59·7	83·8	37·0	19·9	41·6	46·8	53·1	51·4	0·6	N.N.W. & N.E.	6·6	31	6·55	4·4	1·4	0·767	5·4	529	82
Royal Observatory, Greenwich	29·659	59·8	84·4	37·6	20·2	41·4	46·8	53·1	51·4	..	N.N.W. & N.E.	..	33	5·07	4·4	1·4	0·757	5·4	527	159
Maidenstone Hill	29·660	59·5	81·0	38·3	15·9	36·3	42·7	56·0	53·1	..	N.N.W. & N.E.	7·0	24	6·76	4·7	1·1	0·810	5·9	529	107
Chiswell Street Brewery	29·637	61·8	80·0	44·0	11·9	28·3	36·0	56·8	53·0	..	.. ..	..	32	7·03	4·7	1·6	0·747	5·7	526	96
St. John's Wood	29·652	58·0	80·0	40·0	16·9	36·8	40·0	54·6	51·8	..	N.N.W. & W.	7·3	36	6·98	4·5	1·1	0·810	5·5	530	150
Rose Hill, near Oxford	29·648	57·9	81·8	33·0	20·2	41·3	48·8	55·1	54·3	2·2	S.W. & N.E.	6·4	30	6·55	4·9	0·9	0·851	6·0	525	270
Thame	29·644	58·7	80·0	33·5	..	..	46·5	55·4	51·9	1·1	N. & W.S.W.	6·0	46	..	4·5	1·4	0·815	5·6	525	230
Radcliffe Observatory	29·674	57·6	80·3	29·6	16·5	38·1	50·7	53·7	51·3	2·0	S.W. & N.E.	7·0	28	6·60	4·4	1·0	0·800	4·7	529	210
Stone Observatory	29·634	57·8	82·5	37·2	20·8	40·0	45·3	54·6	51·5	0·7	W.S.W. & N.W.	4·2	36	6·69	4·5	0·9	0·815	5·4	526	320
Hartwell House	29·620	58·7	80·8	33·0	22·0	42·1	47·8	55·8	53·3	1·3	W.S.W. & N.N.W.	6·0	..	..	4·7	1·0	0·835	6·0	526	250
Hartwell Rectory	29·603	57·6	80·6	34·6	19·7	40·5	46·0	55·4	50·3	0·8	S.W. & N.N.W.	4·6	39	6·19	4·8	0·7	0·866	5·9	525	290
Aylesbury	29·640	60·0	..	..	..	..	..	55·9	52·7	0·4	W.S.W. & N.E.	6·3	38	5·40	4·6	1·3	0·783	5·7	525	284
Linslade	29·664	57·9	85·0	33·0	22·0	44·8	52·0	54·1	51·2	..	N.N.W. & N.E.	..	37	6·00	4·4	1·2	0·789	5·4	526	313
Cardington	29·625	58·6	83·0	32·5	19·5	44·1	50·5	54·8	53·1	0·8	N.N.W. & W.	6·2	33	4·57	4·7	1·1	0·807	5.7	528	100
Bedford	29·618	58·4	83·0	34·0	19·6	43·9	49·0	54·4	52·5	..	N.E. & W.	6·2	33	5·19	4·6	1·2	0·795	5·6	529	100
Norwich	29·612	58·0	81·0	33·0	..	37·7	48·0	55·0	51·3	2·1	N.N.W. & W.S.W.	6·9	35	7·83	4·7	0·9	0·837	5·7	531	39
Grantham	29·653	57·2	80·0	36·6	15·5	37·0	43·4	53·3	50·3	..	N.E. & W.S.W.	6·9	33	8·50	4·2	1·1	0·786	5·2	529	190
Derby	29·661	58·0	77·0	34·0	..	35·0	43·0	54·5	51·5	..	N.E. & W.N.W.	..	39	3·53	4·4	1·1	0·807	5·1	531	100
Holkham	29·621	57·5	81·6	37·7	16·2	36·7	43·9	55·1	52·7	1·1	NNE., NNW., & WSW.	6·9	35	11·37	4·6	0·7	0·871	6·3	532	39
Highfield House	29·610	57·6	84·5	35·0	22·5	45·0	49·5	54·0	51·4	0·4	NNE., NNW., & WSW.	6·7	42	7·09	4·4	1·1	0·808	5·4	530	103
Hawarden	29·650	57·4	80·2	41·5	13·4	32·0	38·7	54·8	52·2	1·8	N.E., N.W., & S.	7·1	41	6·55	4·6	0·7	0·845	5·5	529	260
Gainsborough	29·621	56·8	82·0	36·0	17·3	40·3	46·0	53·0	50·7	0·2	N.E., N.W., & S.	6·0	36	7·42	4·4	1·1	0·800	5·3	532	30
Liverpool Observatory	29·628	58·7	78·3	44·7	10·2	24·4	33·6	55·6	53·5	3·0	NW., W.NW., & Var.	7·2	30	5·69	4·7	0·9	0·837	5·8	531	37
Wakefield Prison	29·634	56·6	80·0	32·5	20·2	45·5	47·5	52·7	50·2	2·0	W.N.W. & W.S.W.	6·7	38	6·68	4·3	1·1	0·795	5·2	531	115
Stonyhurst	29·668	54·9	77·5	33·9	15·9	36·8	43·6	51·9	50·6	1·3	WSW., NE., & NNW.	6·6	43	13·84	4·3	1·0	0·851	5·1	527	381
York	29·669	55·7	80·0	37·0	16·4	37·7	43·0	52·4	49·5	..	W. & N.E.	..	32	6·51	4·2	1·0	0·813	5·1	533	50
Whitehaven	29·585	55·9	74·0	41·0	11·5	28·3	33·0	54·1	52·4	2·0	N.W. & S.W.	..	39	9·98	4·6	0·6	0·895	5·6	533	90
Durham	29·622	54·4	73·8	35·0	15·0	36·1	38·8	51·8	50·4	1·0	NNW., SW., & Var.	6·6	30	9·79	4·3	0·8	0·853	5·3	528	340
Newcastle Lit. and Phil. Soc.	29·715	56·3	75·0	38·0	14·7	32·8	37·0	52·6	49·2	..	S.W., S.E., & N.E.	..	38	..	4·1	1·1	0·789	5·0	531	190
North Shields	..	54·0	74·0	36·4	11·0	30·7	37·6	52·4	50·8	2·5	S.W., N.E., & N.W.	4·3	49	6·90	4·4	0·5	0·902	5·3	535	124
Glasgow	..	55·4	82·4	40·2	12·8	32·2	42·2	..	..	..	WSW., NW., & ENE.	..	40	7·64	..	..	..	..	..	121
Dunino	29·594	56·0	76·0	35·0	15·2	35·0	41·0	51·4	48·7	1·7	S.W. & W.	3·8	23	6·04	4·0	1·3	0·765	4·9	524	250

REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th January, 1851 and 1852; showing the Increase or Decrease thereof.—(*Continued from page* 373, vol. xiv.)

Sources of Revenue.	Years ending 5th January.			
	1851.	1852.	Increase.	Decrease.
	£	£	£	£
Customs	18,614,880	18,761,069	146,189	....
Excise	13,003,961	13,093,170	89,209	....
Stamps	6,095,641	5,933,549	....	162,092
Taxes	4,360,178	3,563,962	....	796,216
Property Tax	5,383,037	5,304,923	....	78,114
Post Office	820,000	1,064,000	244,000	....
Crown Lands	160,000	150,000	....	10,000
Miscellaneous	178,552	172,241	....	6,311
Total Ordinary Revenue	48,616,249	48,489,267	479,398	1,052,733
Imprest and other Moneys .	691,447	643,410	....	48,037
Repayments of Advances....	708,618	802,943	94,325	....
Total Income.....	50,016,314	49,489,267	573,723	1,100,770
Deduct Increase				573,723
Decrease on the Year				527,047

Sources of Revenue.	Quarters ending 5th January.			
	1851.	1852.	Increase.	Decrease.
	£	£	£	£
Customs	4,596,705	4,559,512	....	37,193
Excise	3,715,920	3,552,970	....	162,950
Stamps	1,459,721	1,427,485	....	32,236
Taxes	1,923,053	1,185,922	....	737,131
Property Tax	418,730	367,956	....	50,774
Post Office	152,000	246,000	94,000	....
Crown Lands	60,000	40,000	....	20,000
Miscellaneous	20,391	30,574	10,183	....
Total Ordinary Revenue	12,346,520	11,410,419	104,183	1,040,284
Imprest and other Moneys	132,246	117,545	....	14,701
Repayments of Advances	135,116	372,371	237,255	....
Total Income.....	12,613,882	11,900,335	341,438	1,054,985
Deduct Increase				341,438
Decrease on the Quarter				713,547

Consolidated Fund Operations.—The total income brought to this account in the quarter ending 5th January, 1852, was 12,000,055*l.* The total charge upon it was 7,840,140*l.*, leaving a surplus of 4,159,915*l.*

The surplus Revenue, after providing for the charges on the Consolidated Fund, and for the payment of Supply Services in Great Britain in the quarter ending 5th January, 1852, was 190,543*l.*

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Fourth Quarter of 1851; *together with the Average Prices for the whole Quarter.*—(*Continued from p.* 374, vol. xiv.)

Returns received at the Corn Office, Board of Trade.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
	Weekly Average	Aggregate Average of Six Weeks' regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending, 1851.	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
October 4	35 7	37 8	25 1	17 6	24 2	27 10	27 1
11	35 6	37 1	25 2	17 3	25 0	27 8	26 2
18	36 0	36 7	24 9	17 0	23 6	27 6	27 2
25	36 9	36 4	25 5	17 5	23 8	28 6	27 7
November 1	36 6	36 2	25 7	17 5	24 10	28 6	27 5
8	36 1	36 1	26 1	17 6	25 1	28 10	28 2
15	36 4	37 4	26 7	18 1	26 0	28 8	28 3
22	36 9	36 5	27 0	18 3	23 2	29 8	28 7
29	37 2	36 7	27 1	18 8	25 7	30 5	28 10
December 6	37 6	36 9	27 0	18 2	27 6	30 6	29 6
13	37 5	36 11	26 8	18 6	27 2	30 2	30 0
20	37 7	37 2	26 6	18 3	27 4	29 9	29 6
27	37 2	37 3	26 3	18 3	28 1	29 2	29 0
Average for the Quarter	36 $7\frac{1}{2}$	..	26 1	17 $10\frac{1}{4}$	25 $5\frac{1}{2}$	29 0	28 3

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 10*th October*, 5*th November*, *and* 5*th December*, 1851; *the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouse at the close of them.*—(*Continued from p.* 374, vol. xiv.)

[From the "London Gazette."]

WHEAT.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1851.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
10th Oct.	297,626	2,654	300,280	297,626	2,654	300,280	8,633	9	8,642
5th Nov.	139,178	2,748	141,926	139,178	2,748	141,926	8,633	9	8,642
5th Dec.	128,061	5,802	133,863	129,212	5,802	135,014	7,483	0	7,492

WHEAT-FLOUR.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1851.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
10th Oct.	577,438	47,038	624,476	577,438	47,038	624,476	1,230	7	1,237
5th Nov.	195,083	61,224	256,307	195,083	61,224	256,307	1,230	7	1,237
5th Dec.	240,073	54,437	294,510	240,073	54,437	294,510	1,230	7	1,237

Fluctuation in the Stock and Share Market during the Year 1851.—(*Continued from p.* 375, vol. xiv.)

Stock and Shares.	Amount of Share.	Amount Paid.	Price on the 1st January, 1852.	Price on the 1st January, 1851.	Highest Price during the Year.	Lowest Price during the Year.
	£ s. d.	£ s. d.				
Consuls	...	...	96½	98½	99⅛	95¾
Exchequer Bills	...	...	58*s.* Pm.	56*s.* Pm.	62*s.* Pm.	38*s.* Pm.
RAILWAYS—						
Brighton	Stock	100 0 0	87	...	99¼	86½
Caledonian	50 0 0	50 0 0	10¼	15½	17½	9⅛
Eastern Counties	20 0 0	20 0 0	6⅛	6⅞	8½	5
Great Northern	25 0 0	24 0 0	17⅝	18¼	19⅛	15¼
Great Western	100 0 0	100 0 0	77¾	85¼	94	74¾
London and North Western	Stock	100 0 0	123½	115⅜	135	111
Midland	Stock	100 0 0	47	55⅛	67¾	36½
North Staffordshire	...	...	9	...	12⅛	7½
South Eastern	33 2 4	33 2 4	23¾	20	29	18⅜
South Western	Stock	100 0 0	77½	85¾	92¾	76½
York, Newcastle, and Berwick	Stock	25 0 0	18¾	17⅜	23½	16½
York and North Midland	50 0 0	50 0 0	22½	21¾	30¼	16
Boulogne and Amiens	20 0 0	20 0 0	8¾	...	11⅜	8¾
Northern of France	20 0 0	16 0 0	15⅛	...	18⅞	13⅞
East Indian	20 0 0	9 0 0	18⅞	...	21⅛	28⅞

Average Price of Meat as sold in Smithfield Market in the Months of Oct., Nov., and Dec., 1851.—(*Continued from p.* 375, vol. xiv.)

[From Returns sent to the Board of Trade.]

Description.	Oct.	Nov.	Dec.	Description.	Oct.	Nov.	Dec.	Description.	Oct.	Nov.	Dec.
	s. d.	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*
Inferior Beasts	2 6	2 6	2 8	Inferior Sheep	2 8	3 2	3 0	Coarse Calves	3 2	3 4	3 6
2nd class	2 8	2 10	3 0	2nd Class	3 0	3 8	3 6	Small Prime Calves	3 8	3 8	4 0
3rd class (Large Prime)	3 2	3 2	3 4	3rd do. (long coarse woolled)	3 6	4 0	4 0	Large Hogs	3 2	3 2	3 8
4th class (Scots)	3 6	3 6	3 8	4th do. (South Down)	3 10	4 2	4 4	Small Neat Porkers	3 10	3 10	4 6
				Lambs	...	...	...				

N.B.—Price of Meat at the rate of 8 lbs. Avoirdupois to the stone, sinking the offal.

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 18th October, the 15th November, and the 20th December, 1851.—(Continued from p. 376, vol. xiv.)

[From the "London Gazette."]

ISSUE DEPARTMENT.

	Weeks ending		
	18th October, 1851.	15th Nov., 1851.	20th Dec., 1851.
	£	£	£
Notes issued	28,458,270	29,114,435	30,818,250
Government Debt	11,015,100	11,015,100	11,015,100
Other Securities.....	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion	14,424,895	15,081,060	16,784,875
Silver Bullion.....	33,375	33,375	33,375
Total.....	28,458,270	29,114,435	30,818,250

BANKING DEPARTMENT.

Proprietors' Capital	14,553,000	14,553,000	14,553,000
Rest	3,147,472	3,180,188	3,132,978
Public Deposits.....	5,396,169	6,938,290	9,202,522
Other Deposits	10,339,401	9,308,899	9,360,449
Seven-Day and other Bills	1,268,108	1,189,609	1,098,788
Total.....	34,704,150	35,169,986	37,347,737
Government Securities, including Dead Weight Annuities	13,241,768	13,241,768	13,244,220
Other Securities.....	13,083,883	11,818,439	11,366,148
Notes	7,782,265	9,528,870	12,142,055
Gold and Silver Coin	596,234	580,909	595,314
Total.....	34,704,150	35,169,986	37,347,737

COUNTRY BANKS.

Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks, by which issued in each part of the Kingdom, during the months ending 1st November, 29th November, and 27th Debember, 1851.—(Continued from p. 376, vol. xiv.)

Banks.	1st November, 1851.	29th November, 1851.	27th December, 1851.
England—Private Banks	3,605,425	3,499,762	3,371,061
Joint Stock Banks	2,860,449	2,783,190	2,678,437
Scotland—Chartered, Private, and Joint Stock Banks.....	3,306,433	3,590,459	3,356,974
Ireland—Bank of Ireland, Private and Joint Stock Banks	4,712,889	4,848,406	4,726,767
Total.....	14,485,196	14,721,817	14,133,239

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

JUNE, 1852.

Eighteenth Annual Meeting of the Statistical Society of London.
Session 1852-3. T. TOOKE, ESQ., V.P., *in the Chair*.

[Held at No. 12, St. James's Square, Monday, March 15, 1852.]

THE Report now submitted, is the eighteenth annual statement laid before the Society; and the Council have the satisfaction of feeling that it is amongst the most encouraging which it has fallen to their lot to make.

If the number of members enrolled upon the books of the Society may be taken as a test of its prosperity, the summary of the past year cannot but prove most satisfactory. The new members are 29 in number, whilst the Society has to lament the loss of only 4 members by death and 5 by withdrawal, leaving a balance of 20 new members. This is the largest addition made in any one year since the Society may be considered to have been fairly established. The names of 5 foreign honorary members having been duly submitted to the Council, were elected at the last ordinary meeting, viz.:—

M. Ramon de la Sagra, Spain; Dr. Friedlander, Russia; Mr. Kennedy, United States; Dr. Schleisner, Denmark; M. Visschers, Brussels.

The Society had the pleasure of extending to some of these gentlemen, and to other distinguished foreigners, that hospitality which was generally accorded by our Literary and Scientific Societies to the eminent persons attracted by the Great Exhibition. One gratifying result of the personal intercourse thus brought about will be presently mentioned in the form of some valuable additions to the library of the Society.

The financial condition of the Society, in consequence of diminished expenditure on the one hand, and an increase of members on the other, is very satisfactory. The Report of the Auditors shows that the balance in hand at the end of the year 1851 exceeded the balance of the previous year by upwards of 32*l*., whilst the liabilities have been reduced by more than 24*l*. Two compositions have been received in the course of the year, and 25*l*. of arrears were collected.

The following is a summary of the leading contributions submitted to the Society at their ordinary meetings:—

In Vital Statistics several important papers were brought forward. Lieut.-Col. Sykes directed the attention of the Society to the Mortality prevailing among European and Native Troops of the Madras Presidency, from 1842 to 1848, from the Prevailing Diseases, and as influenced by Intemperance. Mr. Neison added to his already large number of valuable essays on this class of subjects a paper on the Mortality among Persons of Intemperate Habits; Dr. Guy still further extended his series of essays on the Duration of Life among the Upper

and Middle Classes of Society, by a paper on the Duration of Life among the Clergy; and Mr. R. T. Jopling contributed a short paper on the Sanitary Statistics of the Metropolis.

The division of Economical and Commercial Statistics comprises a paper, by Lieut.-Col. Sykes, on the Taxation and Revenue of the Free City of Frankfort-on-the-Maine; on Commercial Statistics and an Attempt at a Universal Commercial Code, by Mr. Leone Levi; on Coffee and the Coffee Trade, by Mr. J. Crawford; and on the Public Debts and Revenues contrasted with the Areas and Populations of the Various Countries of Europe, by the Assistant-Secretary.

The important department of Educational Statistics is illustrated by Mr. Fletcher's paper on Farm Schools and Agricultural Colonies, and the Classes for whose Education and Discipline they are available.

The Council have the satisfaction of adding that these papers were read and discussed in the presence of larger meetings than those of ordinary years; and that the science of statistics is exciting greater interest in the minds of the educated and well-informed members of society.

In acknowledging the donations of books, the Council are bound to make special mention, in the first place, of the support extended to them on the part of the Colonial Department of Her Majesty's Government, by the early communication of interesting documents relating to the British Possessions abroad.

Next in order of importance, the Council would advert to the large and curious collection of American Statistics, contributed by Mr. Edward Jarvis, of Dorchester, Massachusetts.

The donations of foreign statistical works, to which allusion has already been made, comprise contributions by Baron von Reden, relating to Finance in Germany; by MM. Ducpétiaux, Villermé and Visschers, relating to Asylums and Savings' Banks; by M. Wolowski, relating to Subjects connected with Political Economy; by M. Ramon de la Sagra, the Spanish Commissioner to the Great Exhibition, on the Statistics of his country (the earliest in which statistics were collected) and its contributions to that great industrial collection; by M. Meidinger, on the Statistics of the British Empire; by the Marquis d'Azeglio, on Sardinian Statistics; by Professors Ackersdyck, Holst, and Bergsöe, and Messrs. C. E. Ljungberg, Engel, and Philippo Corridi, on the Statistics of the Netherlands, Norway, Denmark, Sweden, Saxony, and Tuscany, respectively. The Society continues to receive costly and valuable additions to the library from the Smithsonian Institute. They are also expecting some interesting statistical documents relating to the Census of the United States, from Mr. Kennedy, one of their recently elected honorary members. The Society continue to be under obligations to the Court of Directors of the East India Company for additions to their library.

The usual donations of the Journals and Transactions of the English Scientific Societies have been also received, completing the largest amount of donations in books ever received by the Society in one year.

The Council cannot conclude their Report without congratulating the Society on its satisfactory condition and encouraging prospects. The true bearing of their labours on the great questions which interest society and promote the welfare of the community is becoming better understood, and its sphere of usefulnessis being proportionably enlarged.

Abstract of RECEIPTS *and* EXPENDITURE *from the* 1*st* JANUARY *to the* 31*st* DECEMBER, 1851.

RECEIPTS.	£	s.	d.
To Balance in the hands of the Treasurer	60	17	2
„ „ Secretaries	5	2	2½
Arrears of Subscriptions. 1 for 1845 £2 2 0			
1 1846 2 2 0			
2 1847 4 4 0			
1 1848 2 2 0			
2 1849 4 4 0			
5 1850 10 10 0	25	4	0
Subscriptions, 260 for 1851	546	0	0
Compositions	42	0	0
Dividends	27	11	2
Sale of Journal	50	10	2
	£757	4	8½
Assets, December 31, 1851:—			
Cash Balance £87 1 6			
Petty Cash Balance 10 13 8½			
Price of Fixtures 31 12 0	129	7	2½
Stock in 3¼ per Cent., Reduced £569 17*s.*, cost £567			
„ 3 per Cent. Consols £328 15*s.* 4*d.* „ £300	867	0	0
Arrears of Subscriptions. 1 for 1843 £2 2 0			
1 for 1844 2 2 0			
3 for 1845 6 6 0			
3 for 1846 6 6 0			
7 for 1847 14 14 0			
13 for 1848 27 6 0			
15 for 1849 31 10 0			
29 for 1850 60 18 0			
31 for 1851 65 2 0	216	6	0
Total Assets	£1,212	13	2½

EXPENDITURE.	£	s.	d.
By Rent	150	0	0
Salaries	155	0	0
House Expenses—			
Female Servant £4 0 0			
Fire Insurance 2 10 0			
Miscellaneous 18 3 5½			
Oilman 5 18 8			
Coals 6 5 0	36	17	1½
Printing	200	0	0
Stationer	29	5	1
Editing and Advertising Journal—			
Editor's Salary £50 0 0			
Advertising 14 12 0	64	12	0
Parcels (including Delivery of Journal), and Postage	4	3	7
Library—			
Charges on Books from America £6 2 3			
Miscellaneous 1 3 0	7	5	3
Miscellaneous—			
Petty Cash £11 6 5½			
Christmas Gratuities 1 0 0	12	6	5½
Cash Balance	87	1	6
Petty Cash Balance	10	13	8½
Total	£757	4	8½

Liabilities, December 31, 1851:—

	£	s.	d.
Printer	£344	17	8
Stationer	11	11	11
Oilman	3	11	6
Coal Merchant	2	6	0
Book Binder	8	19	3
Total	£371	6	4

We have audited the above account, and find a balance due to the Society of £97 15*s.* 2½*d.*

(Signed) F. G. P. NEISON,
R. THOMPSON JOPLING,
FREDERICK LACK.

Mortality and Sickness of the Bombay Army, 1848-9.

By Lieut.-Colonel W. H. Sykes, F.R.S.

[Read before the Statistical Society of London, 15th March, 1852.]

The following is a return of the health of the Bombay Army for the year 1848-9.

Sickness and Mortality of the Troops, European and Native, under the Government of Bombay, during the year 1848-49.

Health of Troops in 1848-9 at

	Europeans and Natives.	Average Strength during the Year.	Number Treated.	Number Died.	Ratio per Cent. to Strength of	
					Treated.	Died.
Bombay	European	686·08	1,518	38	221·28	5·53
	Native	5709·	4,420	37	77·421	0·648
Aden	European	487·	864	12	177·41	2·46
	Native	....	....	....	....	....
Kirkee	European	744·	1,684	9	226·340	1·210
	Native	....	....	....	....	....
Poonah	European	1818·5	4,450	34	244·77	1·87
	Native	2226·500	1,665	17	74·797	0·763
Ahmednugger	European	354·333	992	6	279·962	1·693
	Native	1499·833	1,549	10	103·335	0·666
Sholapore	European	99·	219	2	221·21	2·02
	Native	1406·	1,401	3	99·644	0·213
Kolapoor	European	99·83	323	3	326·26	3·03
	Native	1858·	1,860	13	100·107	0·699
Belgaum	European	1156·	1,790	19	154·844	1·64
	Native	1891·83	836	14	44·209	0·740
Deesa	European	1285·66	2,114	36	164·513	2·801
	Native	1251·58	1,225	8	97·921	0.639
Kurrachee	European	1944·91	3,120	59	160·49	3·03
	Native	1678·16	2,285	37	136·174	2·205
Bhooj	European	102·14	78	....	76·47	....
	Native	890·	767	7	86·179	0·785
Peshawur and Mooltan	European	2222·6	1,842	31	82·89	1·39
	Native	5917·	3,675	81	62·109	1·368

Total Average	1848–9	European	2·263
		Native	0·933
	1847	European	2·781
		Native	1·076

As a whole, this report of the Bombay Army is the most satisfactory which has ever been received, particularly in relation to the European portion of it; and, in regard to the native soldiery, in the preceding twenty-four years there are only three years in which the mortality was less than in 1848-9. At some of the stations, the mortality was less than it usually is within the United Kingdom; for instance, at Kirkee, in the

Deccan, a regiment of European dragoons, 744 strong, lost only 9 men, or 1·210 per cent. At Peshawur and Mooltan, 2,222 Europeans in the field lost only 31 men, or 1·39 per cent. At Belgaum, in the Deccan, 1,156 Europeans lost 19 men, or 1·64 per cent. At Ahmednugger, 354 Europeans lost 6 men, or 1·69 per cent. At Poona, 1,818 Europeans lost 34 men, or 1·87 per cent. Even in that confined and hitherto-dreaded locality, the fortress of Aden, on the coast of Arabia, 487 Europeans lost only 12 men, or 2·46 per cent. The greatest mortality, with the exception of Bombay, occurred in the Kurrachee cantonment at the mouth of the Indus, in Scinde, where 1,945 Europeans lost, in one year, 59 men, or 3·03 per cent.; and yet this constant mortality amongst European troops can scarcely be attributed to the climate of Bombay, for the European community do not suffer in the same ratio, and several individuals, within my personal knowledge, have kept their health uninterruptedly for many years. The native population, also, as far as the limited record of deaths (which are annexed) permits us to judge, for the years 1848-9-50, lose annually only $2\frac{1}{2}$ per cent., inclusive of cholera, the population of the island being about 525,000. I cannot, therefore, but attribute this disproportionate mortality amongst the European troops to adventitious circumstances, to defective barrack accommodation and ventilation, or to the nature of the soil upon which the barracks on Colaba are built, but chiefly to intemperance. The mean annual deaths of the Europeans of the Bombay army for twenty years, from 1825 to 1844, was only 5·078 per cent., inclusive of losses from cholera, or half per cent. less than the loss in Bombay for 1848-9.

The average mortality amongst the native troops (0·933) is less than the average of twenty years (1·291 per cent.), from 1825 to 1844; and at every station, with the exception of two, it has not amounted to 1 soldier in 100 per annum. Indeed, at Sholapoor, in the Deccan, two regiments, 1,406 strong, lost only 3 men, or 1 in 468. And, in a whole year, to have only 1 death out of 468 men of all ages, from 16 to 60 or 70, is most remarkable. In Bombay, so fatal to Europeans, where 5·52 per cent. died, 5,709 native troops lost only 37 men, or 0·648 per cent., or 1 death in 157 men. The climate least favourable to the native troops of the Bombay army, as I have had reason to show on a former occasion, is that of Scinde, on the banks of the Indus. At Kurrachee, the mortality, although still less than that of Great Britain, is more than double that of the cis-Scinde stations: 1,673 sepoys lost 37 of their number, or 2·205 per cent.; and in other parts of Scinde and the Punjab, the mortality was *comparatively* great, as 5,917 sepoys lost 81 men, or 1·368 per cent. If we look to the sickness of the troops, in contradistinction to the mortality, as indicated by the admissions into hospital, we shall find that sickness and mortality do not proceed *pari passu*. For instance, the greatest* number of admissions of Europeans (279·962 per cent.) occurred at Ahmednugger, so that each soldier went nearly three times into hos-

* Kolapoor is an exceptional case, and is not a proper criterion, from the small number of Europeans.

pital during the year, while only 1·693 per cent. of deaths took place. The next greatest number of admissions is at Poona, where 244·77 of the men went into hospital, while the deaths were only 1·87 per cent. As a contrast to this, at Bombay, 221 per cent. of the European troops passed through the hospital, while the deaths were $5\frac{1}{2}$ per cent. Even at Kirkee, where little more than 1 trooper in 100 died, 226 per cent. of the men entered the hospital, the smallest number of admissions (82·89 per cent.) took place while the European troops were in the field at Peshawur and Mooltan; confirming my early opinions, from personal knowledge and experience, that European troops in India are always most healthy, even in the hot season, when marching. The influx of Europeans into hospital at Ahmednugger may be explained by the fact, that it is the depôt for recruits for the artillery. The maximum of entrances of natives into hospital was, at Kurrachee, 136·174 per cent., and the next greatest number at Ahmednugger, 103·335 per cent.; but it is not a usual thing for every native soldier to enter the hospital once in the year. At Belgaum, there was only 1 admission to $2\frac{1}{4}$ men. Like the Europeans, the native troops, for the most part, may be said to be less afflicted with sickness while in the field than in cantonments.

That this remarkable health of the native troops is not limited to the Bombay army, I have an opportunity of testifying, from official returns of the mortality in Scindiah's Contingent, from the 1st April, 1849, to 1st April, 1850, which are annexed.

The 1st company of artillery (natives), 155 strong, and the 5th company, 68 strong, did not lose a man between them; and the 4th company, 103 strong, lost only 1 man. The 6th regiment of infantry, 765 strong, lost only 1 soldier, and the small mortality in other regiments was equally remarkable. The greatest mortality, indeed, of the whole force which occurred in the 3rd company of artillery, was only 1·25 per cent. The whole force of 6,992 men lost only 50, or 0·71 per cent., or 1 in 119 men.

On the present, as on former occasions, I have dwelt strongly upon the remarkable healthiness of the native troops, as indicative by analogy, in the absence of returns, of the value of native life in India; and I avow that my object has been to excite the attention of insurance societies in England to the probable pecuniary advantages which would result from the establishment of insurance offices in India, for giving that vast body of native public servants, whose means of providing for their families are dependent upon their own lives, the opportunity of securing something for their widows and children after their deaths. To give them such opportunities, would be to confer a blessing upon a highly respectable and very large class of the native community.

Scindiah's Contingent.

Table *Showing the Relative Number of Sick and Deaths of the different Companies of Artillery and Regiments of Scindiah's Contingent, together with the Ratio per Cent. of Sick and Deaths during Twelve Months, from* 1st *April*, 1849, *to* 1st *April*, 1850.

	Total Strength during the 12 Months.	Average Monthly Strength.	Remaining.	Admitted into Hospital during 12 Months.	Total Sick during 12 Months.	Discharged during 12 Months.	On Sick leave.	Absconded.	Transferred.	Died.	Remaining.	Per Cent. of Sick of Strength.	Per Cent. of Deaths to Strength.	Per Cent. of Deaths to Sick.	Names of Medical Officers in Charge.
1st Company of Artillery	1,862	$155\frac{2}{12}$	2	137	139	135	..	..	3	..	1	7·46	..	..	H. M. Macpherson and P. O'Brien.
2nd „ „	2,027	$168\frac{11}{12}$	1	89	90	83	..	..	..	3	4	6·44	1·78	3·33	W. M. Norris, G.M., C.B., W. J. Loch, P. O'Brien, and J. H. Littler, M.D.
3rd „ „	1,928	$160\frac{8}{12}$	..	123	123	116	..	..	2	2	3	6·39	1·25	1·62	P. O'Brien and H. M. Macpherson.
4th „ „	1,244	$103\frac{8}{12}$	1	66	67	61	..	..	3	1	2	5·37	0·97	1·49	A. W. Crozier and W. J. Loch.
5th „ „	821	$68\frac{5}{12}$	3	13	16	15	..	..	..	..	1	1·82	..	..	A. H. Cheek, P. O'Brien, and W. J. Loch.
1st Cavalry Regiment	4,616	$384\frac{8}{12}$	4	239	243	231	..	..	3	4	5	5·26	1·04	1·64	W. J. Loch.
2nd „ „	5,451	$454\frac{3}{12}$	16	657	673	641	12	..	..	3	17	12·3	0·66	0·46	H. M. Macpherson.
1st, or Grenadier Regiment ..	9,722	$810\frac{2}{12}$	27	650	677	642	4	..	4	6	21	6·96	0·74	0·88	H. M. Macpherson, W. M. Norris, G.M., C.B., and James Sheetz, G.M., C.B.
2nd Infantry Regiment	10,446	$870\frac{6}{12}$	22	575	597	563	11	..	..	8	15	5·67	0·91	1·34	A. H. Cheek, W. J. Loch, W. M. Norris, G.M., C.B., and James Sheetz, G.M., C.B.
3rd „ „	9,959	$829\frac{11}{12}$	10	616	626	584	2	1	21	6	12	6·2	0·72	0·95	Jas. Sheetz, G.M., C.B., W. M. Norris, G.M., C.B., and H. M. Macpherson.
4th „ „	10,322	$866\frac{2}{12}$	29	785	814	780	7	..	..	7	20	7·88	0·81	0·85	P. O'Brien and J. H. Littler, M.D.
5th „ „	7,243	$603\frac{7}{12}$	4	541	545	527	2	..	..	6	10	7·53	0·99	1·1	F. Moore, M.D.
6th „ „	9,184	$765\frac{4}{12}$	19	574	593	567	8	..	4	1	13	6·44	0·13	0·16	A. W. Crozier and J. H. Littler, M.D.
7th „ „	9,007	$750\frac{7}{12}$	18	479	497	480	5	..	1	3	8	5·51	0·39	0·6	J. H. Littler, M.D., and A. W. Crozier.
		6992								50			0·71		

TABLE *showing the Ratio per Cent. of Sick to Strength of the different Companies of Artillery and Regiments, from* 1*st April*, 1849, *to* 1*st April*, 1850, *arranged agreeably to the rate of health.*

	Ratio per Cent. of Sick to Strength.
5th Company of Artillery	1·82
2nd ,, ,,	4·44
1st Cavalry Regiment	5·26
4th Company of Artillery	5·37
7th Infantry Regiment	5·51
2nd Infantry Regiment	5·67
3rd Infantry Regiment	6·02
3rd Company of Artillery	6·39
6th Infantry Regiment	6·44
1st or Grenadier Regiment	6·96
1st Company of Artillery	7·46
5th Infantry Regiment	7·53
4th Infantry Regiment	7·88
2nd Cavalry Regiment	12·03

TABLE *showing the Strength and Relative Number of Sick and Deaths at the different Stations of Scindiah's Contingent, together with the Ratio per Cent. of Sick and Deaths, for Twelve Months, from* 1*st April*, 1849, *to* 1*st April*, 1850, *arranged agreeably to the Rate of Health.*

	Total Strength during the Year.* Native Officers, Non-Commissioned Officers, Rank and File.	Per Cent. of Sick to Strength.	Per Cent. of Deaths to Sick.	Per Cent. of Deaths to Total Strength.
Mehonah	4,384	5·42	0·43	0·25
Seepree	6,616	5·77	0·54	0·34
Poonah	4,092	6·33	0·77	0·58
Gwalior	37,645	6·35	1·17	0·89
Lullutpore	8,143	7·34	1·00	0·88
Augur	11,352	8·04	0·43	0·42
Goonah	1,110	10·63	....	....
Boorhunpore	3,733	11·38	0·94	1·28
Munderore	561	15·33	....	....

* These numbers would appear to be the annual accumulation of the monthly strength.

Return of the Mortality for the Town and Islands of Bombay and Colaba for the Year 1848.

1848.	Christians.			Jews.			Mahomedans.			Parsees.			Hindoos not Eating Flesh.			Hindoos Eating Flesh.			Chinese.			Total.			Grand Total.
	Natural.	Cholera.	Violent.	Natural.	Cholera.	Violent.	Natural.	Cholera.	Violent.	Natural.	Cholera.	Violent.	Natural.	Cholera.	Violent.	Natural.	Cholera.	Violent.	Natural.	Cholera.	Violent.	Natural.	Cholera.	Violent.	
January	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	915	13	6	934
February ...	49	..	..	..	..	..	131	1	2	47	..	..	57	1	..	290	7	3	..	..	..	1,037	11	9	1,057
March	76	..	2	5	..	1	279	1	..	80	..	..	115	1	..	577	5	..	..	..	..	1,132	7	3	1,142
April	60	1	3	4	..	..	299	3	2	73	2	..	112	1	..	580	9	6	..	..	..	1,128	16	11	1,155
May	35	..	1	1	..	..	246	..	..	67	..	..	93	..	..	530	9	2	..	..	..	972	9	3	984
June	57	..	1	4	..	..	207	1	..	61	..	..	67	1	1	416	7	3	..	..	..	812	10	5	827
July	53	..	2	1	..	..	208	1	1	51	..	..	93	1	1	433	3	3	..	..	..	839	5	7	851
August	44	..	..	6	..	..	170	..	..	47	..	..	104	1	..	401	1	8	..	..	..	772	2	8	782
September ..	54	..	..	3	..	..	172	..	2	50	1	..	77	..	1	404	..	7	..	..	..	760	1	10	771
October	47	..	1	1	..	..	177	..	1	69	..	2	86	..	1	455	..	4	..	..	..	835	..	9	844
November...	69	..	4	5	..	..	164	1	1	63	..	1	90	..	3	396	4	7	1	..	..	788	5	16	809
December...	78	..	..	4	..	..	215	..	3	70	..	..	92	..	..	521	..	10	..	..	..	980	..	13	993
Total.....	622	1	14	34	..	1	2,268	8	12	678	3	3	986	7	6	5,003	45	53	1	..	..	10,970	79	100	11,149

Return of the Mortality for the Town and Islands of Bombay and Colaba for the Year 1849.

1849.	Europeans.			Indo-Briton and Indo-Portuguese.			Native Christians and Jews.			Mussulmans.			Parsees.			Jains and all Hindoos.			Others and unknown Castes.			Total.			Grand Total.
	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	
January	...	...	...	...	...	...	69	...	2	221	...	1	61	...	1	588	...	5	...	...	...	939	...	9	948
February	...	...	...	...	...	...	59	...	1	189	...	2	47	...	...	517	...	5	...	...	...	812	...	8	820
March	...	...	...	...	...	...	73	...	2	219	...	2	55	...	1	589	1	9	1	...	...	937	1	14	952
April	...	...	...	...	...	...	48	...	1	206	2	...	65	...	...	617	2	8	...	...	...	936	4	9	949
May	...	...	...	...	...	...	71	...	1	211	...	1	83	...	...	581	...	3	...	...	...	946	...	5	951
June	...	...	...	...	...	...	70	...	1	178	...	1	56	...	1	498	...	10	...	...	...	802	...	13	815
July	...	...	...	...	...	...	64	...	2	189	...	1	69	...	1	588	...	5	1	...	...	911	...	9	920
August	...	...	...	...	...	...	53	26	1	218	33	1	65	...	1	634	68	4	...	...	...	970	127	7	1,104
September*	10	18	...	8	10	...	32	20	1	201	138	1	60	17	2	501	490	10	34	15	2	846	708	16	1,570
October	12	4	1	5	...	...	35	18	...	181	70	3	58	9	...	535	243	12	3	...	2	829	344	18	1,191
November	13	2	...	6	...	1	33	12	1	229	37	1	53	6	...	525	204	6	2	...	...	861	271	9	1,141
December	40	12	...	5	3	...	49	27	...	218	119	3	70	26	...	634	465	6	40	21	1	1,056	673	10	1,739
Total in 1849	75	36	1	24	13	1	656	103	13	2,460	409	17	742	58	7	6,807	1,473	83	81	36	5	10,845	2,128	127	13,100
Total in 1848	...	...	...	...	...	...	656	1	15	2,268	8	12	678	3	3	7,367	67	70	1	...	...	10,970	79	100	11,149
Increase	75	36	1	24	13	1	...	102	...	192	401	5	64	55	4	...	1,406	13	80	36	5	...	2,049	27	1,951
Decrease	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	560	...	...	...	...	...	125	...	...	...

* Europeans shown separately from September.

Return of the Mortality for the Town and Islands of Bombay and Colaba for the Year 1850.

1849.	Europeans.			Indo-Briton and Indo-Portuguese.			Native Christians and Jews.			Mussulmans.			Parsees.			Jains and all Hindoos.			Others and unknown Castes.			Total.			Grand Total.
	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	Natural.	Epidemic.	Violent.	
January	35	3	1	10	2	...	43	6	1	216	22	1	55	17	...	598	82	3	...	...	1	957	132	7	1,096
February	21	1	...	13	...	...	34	1	...	231	11	...	56	3	...	626	39	4	4	...	...	985	55	4	1,044
March	22	...	...	5	...	...	55	19	...	294	38	2	71	16	2	704	210	1	2	...	2	1,153	283	7	1,443
April	16	11	...	2	1	...	44	26	1	314	105	1	79	13	...	802	445	8	1	1	...	1,258	602	10	1,870
May	5	...	...	2	...	...	42	19	...	284	36	1	92	3	...	838	237	9	1	...	1	1,264	295	11	1,570
June	18	4	1	1	...	...	53	14	...	255	38	2	80	6	...	727	169	3	...	...	1	1,134	251	7	1,392
July	15	21	...	3	...	...	41	27	4	250	65	1	67	29	...	666	184	4	1	...	...	1,043	326	9	1,378
August	16	3	...	3	...	...	60	34	...	230	110	1	70	12	3	619	191	3	...	...	1	998	350	8	1,356
September	7	5	...	4	...	...	38	9	...	191	36	1	60	10	1	556	75	9	...	...	...	856	135	11	1,002
October	19	1	1	...	...	...	38	1	1	175	13	1	40	...	1	534	35	6	1	...	...	807	50	10	867
November	22	...	1	1	...	...	41	4	...	220	16	3	62	...	...	591	35	14	4	3	1	941	58	19	1,018
December	10	4	1	1	...	...	42	17	...	236	109	4	54	17	3	595	353	7	1	...	2	939	500	17	1,456
Total in 1850	206	53	5	45	3	...	531	177	7	2,896	619	18	786	126	10	7,856	2,055	71	15	4	9	12,335	3,037	120	15,492
Total in 1849	75	36	1	24	13	1	656	103	13	2,460	409	17	742	58	7	6,807	1,473	83	81	36	5	10,845	2,128	127	13,100
Increase	131	17	4	21	...	...	...	74	...	436	210	1	44	68	3	1,049	582	...	...	...	4	1,490	909	...	2,392
Decrease	...	...	...	...	...	1	125	...	6	...	...	...	...	...	...	...	...	12	66	32	...	...	...	7	...

On Commercial Statistics, and an Attempt at a Universal Commercial Code. By Leone Levi, Esq

[Read before the Statistical Society of London, 15th December, 1851.]

Statistics have, of late, acquired a prominent position, and are now generally acknowledged as best adapted to furnish materials for legislation. From the extent and accuracy of the information which they furnish we obtain enlarged views of the economical and commercial state of nations; yet the advancement is by no means systematic. Much remains to be done, in order that its achievements may result in universal benefit. What has been accomplished in some countries, and for some specific subjects, may be extended more generally, and we may at length be able to ascertain the state of nations at any given time, both severally and relatively to one another. But in order to arrive at this desideratum, the specific line of inquiry must be marked, and our present wants and defects be clearly traced out.

A work* on the Mercantile Law of Nations, which I have undertaken, suggested to me the idea of illustrating the state of their commerce and finances, at the respective dates of 1840 and 1850. With this view I have sent to foreign countries blank schedules with the various items to be filled, and, in some cases, they were duly returned with the required information. The accounts within my own reach were of such varied dates and of so mixed a character as completely to frustrate my endeavour to realize my original idea.

But how could it be otherwise? The censuses of population are variously taken: in some countries every ten years, in some every five years, and in some every three years; so that, except by calculation, we cannot ascertain the actual population of two or three countries at one date. In some countries the financial year ends in June, in others in January, and in others in October. Hence it is that writers of equal authority are often found contradictory, even in accounts of the same year. And as for the amount of agricultural produce, with few exceptions, no statistics are taken, though a subject of vital importance, and we are left to follow estimates which often prove most erroneous. Under such circumstances, whatever tends to rectify such defects, promotes at once the advancement of statistical science and the soundness of commerce: and two methods are here suggested, one to collect into a focus such information as may be accessible and mark out its deficiencies, the other to promote discussion and action, that such deficiencies may be henceforth supplied. I have attempted to accomplish the first, and the result is now submitted to your consideration.

The Statistical Chart now exhibited is the first of a series of annual statements intended to show the area of all countries; the population, distinguishing races and religion; the state of their finances, distinguishing the proportion of direct and indirect taxes; the amount

* Commercial Law, its Principles and Administration; or, the Mercantile Law of Great Britain compared with the Codes and Laws of Commerce of all Mercantile Countries, by Leone Levi. Dedicated to the Right Hon. the Earl of Harrowby.—London, Simpkin and Marshall, and P. Richardson; Edinburgh, T. and T. Clark.

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expended for war establishments, for justice, and for commerce; and also for the interest of debts; the debt of each country, fixed and floating, and, where possible, the nationalities of the public creditors; the manufactures; the number of spindles and factories; the quantity of refined sugar, hides, cotton, silk, &c., manufactured; produce of grain, specifying the kinds, and of sugar, coffee, tea, oil, tobacco, hemp, &c.; mineral products, such as iron, coal, copper, tin, the precious metals, &c.; the imports and exports; the shipping, specifying the number of vessels and their tonnage, entered inwards and cleared outwards, and the number of vessels and tonnage belonging to each; the railway system, comprising the number of miles of railway constructed, in progress, and projected in each country, the capital invested, and the cost per mile; and, lastly, a table of currencies, weights, and measures, of all nations, compared with those of Great Britain.

This outline is, in itself, sufficient to strike the mind with the difficulty of reducing it into anything like a regular system; yet the attempt is made, and should it be worthy of the serious attention of men whose experience and knowledge render them able to discern its failings, and point out any amendment or improvement, I hope it may, in process of time, attain to that perfection which it aims at.

As to authorities, I have to state that, besides the direct information received by means of the schedules already mentioned, I was indebted to the Board of Trade, the Foreign Office, the Colonial Office, and the East India House, for a free access to their documents, and I have made use of the library of the British Museum and the Advocates' Library in Edinburgh. As to works, I obtained much information from "McCulloch's Commercial and Geographical Dictionaries," (last edition,) "Almanack of Gotha for 1851," "McGregor's Statistics," "The Economist," "Johnston's Gazetteer," (the author of which has kindly given to my labours much personal care,) and such other foreign works, atlases, &c., as the subjects and countries required.

The Mercantile Marine of the World.

Number of Vessels, and Tonnage, belonging to the following Countries:—

Countries.	Tons.	Vessels.	Countries.	Tons.	Vessels.
Great Britain	4,144,115	34,090	Netherlands	396,924	1,793
France	595,344	13,679	Austria	178,000	....
Norway	337,058	3,064	Denmark and Duchies	168,978	4,710
Russia	....	750			
Greece	150,000	4,000	Papal States	133,402	1,520
Naples	100,000	....	Canada	68,553	613
Hamburg	82,053	286	Ceylon	30,828	609
Belgium	22,770	161	Mauritius	10,020	125
Cape of Good Hope	4,089	34	Tuscany	27,598	773
United States	3,535,451	....	Prussia	133,658	977

Totals—Tons 10,118,841 ..... Vessels 67,184

The Shipping and Tonnage Entered Inwards and Cleared Outwards from the following Countries:—

Countries.	Entered.		Cleared.	
	Tons.	Vessels.	Tons.	Vessels.
Great Britain	6,113,696	31,249	5,906,978	29,011
France	1,887,291	15,264	1,430,085	13,868
Netherlands	1,099,771	6,959	1,136,864	7,017
Hamburg	730,596	4,094	729,186	4,114
Canada	628,399	1,699	636,407	1,732
Spain	579,475	5,206	470,973	4,622
Portugal	203,537	2,236	259,124	2,414
Greece	326,337	6,168	290,238	6,396
Cuba	360,000	3,548	360,000	2,949
India	406,479	868	522,056	1,128
Ceylon	168,965	....	164,171	....
Prussia	813,096	4,690	823,456	4,635
South Australia	....	215	30,880	151
United States	4,328,639	21,643	4,361,002	21,805
Russia	1,323,080	6,401	1,177,994	6,197
Norway	772,885	7,969	806,766	8,160
Sardinia	700,000	6,000	700,000	6,000
Austria	547,228	....	562,722	....
Sweden	540,902	6,707	562,394	6,347
Belgium	356,367	2,424	349,638	2,368
Egypt	409,156	2,019	432,696	1,707
Java	271,228	1,638	290,706	1,527
China	169,155	531	163,717	528
Mauritius	123,341	....	121,280	....
Cape of Good Hope	166,387	575	169,990	575
Brazil	208,547	887	180,348	2,497
Van Diemen's Land	99,063	648	99,130	654
Total	23,333,620	139,638	22,738,801	136,402

Grand Total—Tons 46,072,421 ..... Vessels 276,040

The Productions of the World.

Grain.

	Quarters.
Great Britain	60,000,000
Austria	27,000,000
France	62,000,000
United States	118,000,000
Russia	52,000,000
Canada	19,000,000
Spain	12,000,000
Denmark	8,000,000
Two Sicilies	7,500,000
Papal States	3,000,000
Belgium	6,000,000
Sardinia	5,000,000
Sweden	3,500,000
Portugal	3,000,000
Mexico	3,000,000
Netherlands	3,000,000
Bavaria	2,000,000
Egypt	1,500,000
Total	395,500,000

Coals.

	Tons.
Great Britain	38,000,000
United States	4,400,000
France	22,000,000
Belgium	4,500,000
New South Wales	45,000
Total	68,945,000

Precious Metals.

United States—	£
California	14,500,000
Brazil	7,000,000
Russia	3,350,000
Great Britain (Silver)	50,000
Australia	....
Asia	1,400,000
Total	26,300,000

Iron.	Tons.
Great Britain	1,850,000
United States	....
France	600,000
Belgium	230,000
Russia	150,000
Austria	....
Sardinia	22,000
Bavaria	15,000
Spain	18,000
Sweden	157,000
Papal States	800
Total	3,042,800

Silk.	Lbs.
Austrian Italy	7,000,000
Sardinia	2,500,000
Papal States	800,000
Two Sicilies	1,200,000
Tuscany	260,000
Prussia	620,000
Salonica	167,000
China	....
Total	12,547,000

General Commerce of the World.

Countries.	Imports.	Exports.	Countries.	Imports.	Exports.
	£	£		£	£
Great Britain	100,000,000	70,000,000	Sweden	2,300,000	2,500,000
France	45,000,000	56,000,000	Portugal	2,500,000	1,600,000
United States	39,000,000	32,000,000	Java	2,000,000	5,000,000
Hamburg	22,000,000	20,000,000	Mauritius	1,200,000	1,200,000
Netherlands	22,000,000	18,000,000	Ceylon	1,200,000	1,500,000
Belgium	16,000,000	15,000,000	Greece	1,000,000	800,000
Russia	14,000,000	14,000,000	Cape of Good Hope	1,100,000	500,000
New S. Wales	1,500,000	1,800,000			
Austria	8,800,000	6,000,000	Papal States	1,500,000	1,200,000
Brazils	6,500,000	5,500,000	Bavaria	850,000	1,200,000
Spain	6,000,000	5,000,000	Van Diemen's Land	600,000	500,000
Sardinia	9,000,000	6,500,000			
Denmark	5,500,000	3,500,000			
Cuba	5,700,000	5,600,000	Total	321,750,000	279,900,000
Canada	4,000,000	3,000,000			
Egypt	2,500,000	2,000,000	Grand Total	£601,650,000	

The Railway System.

Countries.	Mileage.	Sums Invested.
		£
Great Britain and Ireland	7,000	250,000,000
United States	10,289	66,500,000
Germany	5,342	66,750,000
France	1,818	49,000,000
Belgium	532	9,500,000
Russia	200	3,000,000
Italy	170	3,000,000
Spain	47	.....
Total	25,398	448,750,000

The above tables refer to the latest date on hand, in October, 1851.

The comparative state of the finances of the principal countries seems to be this: Great Britain 3,000,000*l.* revenue above expenditure, Austria 7,000,000*l.* expenditure above revenue, France 2,000,000*l.* expenditure above revenue, United States 1,000,000*l.* revenue above expenditure, Prussia 300,000*l.* expenditure above revenue. The debt

of Great Britain stands highest, 787,000,000*l.*, France 200,000,000*l.*, Spain 155,000,000*l.*, Austria and Holland 100,000,000*l.*, Russia 53,000,000*l.*, United States 13,700,000*l.*, but the several states of the Union have an aggregate debt of 44,000,000*l.*

The estimated produce of the several countries is 395,500,000 quarters of grain, of which 118,000,000 are produced in America, 62,000,000 in France, and 60,000,000 in Great Britain. The quantity of wheat produced in Great Britain is estimated at 18,225,000 quarters. The average consumption per head is calculated to be from six to eight bushels per year, say six bushels, in a population of 27,000,000, which would require 20,250,000 quarters, and 1,750,000 quarters for seed, in all 22,000,000, leaving about 4,000,000 quarters per year to be supplied by importation of foreign grain. The average importation for the last five years, in which the crop of potatoes had failed, and the population were more dependent upon grain, has been 3,901,997 quarters, and for the last ten years 2,891,706 quarters. For these figures I am indebted to Mr. Brown's Table, which exhibits these facts with much clearness. The large proportion of the coarser grains, such as oats, rye, and Indian corn, which are consumed in the northern and foreign countries, renders it impossible to carry out the same calculations of productions and supply without adverting to the quantities used for cattle, distilleries, manufacturing and other purposes.

Mineral products constitute the chief wealth of Great Britain. The enormous quantities of iron and coal, so happily combined in the strata of the earth, give to this country a decided superiority in the supply of all other countries, in the cheapness of the cost of production, and in the adaptation of the use of iron to manifold purposes. The quantity of iron stated to be produced in the countries specified is 3,085,800 tons; of which, 1,850,000 tons of manufactured iron are produced in Great Britain. The quantity of coals produced in Great Britain is stated to be 38,000,000 tons, out of a total of 64,500,000 tons. In America, according to the American Almanack, the produce is 4,400,000, which quantity, however, must be considerably increased lately. The precious metals produced in the Russian mines are valued at 3,350,000*l.*, the Brazilian and South American 7,000,000*l.*, California, from the discovery of the mine to December, 1850, 14,500,000*l.*, and in the present year about 12,000,000*l.*, making a total annual product of about 29,300,000*l.* To these must be added the products of the Australian mines. The value of imports and exports to and from the several countries is 601,650,000*l.*, of which 321,750,000*l.* are the imports, and 279,000,000*l.* the exports. The exports of Great Britain are about 70,000,000*l.*, of which 20 per cent. are sent to America, 11 per cent. to the East Indies, 10 per cent. to the Hanseatic Towns, 5 per cent. to Holland, and $5\frac{1}{2}$ per cent. to the North American colonies. The total mercantile marine seems to be 67,184 vessels, and including America (about 30,000 vessels), 97,184, of 10,118,841 tons, of which 34,090 vessels, of 4,144,115 tons, belong to Great Britain, and 3,535,251 tons belong to the United States, or in the proportion respectively of 41 per cent. and $35\frac{3}{4}$ per cent. of the tonnage. The total navigation of merchant vessels consisted in 276,040 vessels of 46,072,421 tons, of which there were entered, in various ports, 139,638 vessels of 23,333,620 tons, and cleared 136,402 vessels of 22,738,801 tons. Of this, Great Britain par-

ticipated in 31,249 vessels of 6,113,696 tons, entered, and 29,011 vessels of 5,906,978 tons, cleared, and America 21,643 vessels of 4,328,639 tons, entered, and 21,865 vessels of 4,361,002 tons, cleared, or in the proportion respectively of $12\frac{1}{2}$ per cent. and $8\frac{1}{2}$ per cent. in tonnage.

The railway system, so wonderfully developed within a short period, exhibits some striking figures. There appear to be now opened, for public traffic, 25,398 miles, which cost 448,750,000*l.* Of these 7,000 miles are open in Great Britain, at a cost of 250,000,000*l.*, or about 35,000*l.* per mile, and 10,219 in America, at a cost of 66,500,000*l.*, or 6,500*l.* per mile. In Germany, there were 5,342 miles open at a cost of 66,750,000*l.*, or 12,000*l.* per mile. France has 1,818 miles, at a cost of 49,000,000*l.* France has 1 mile of railway for every 111 miles of its area; Belgium 1 for every 25 miles; Great Britain 1 for every 17. The extended means of communication by railways and inland navigation, the improvement in ship-building and extension of steam navigation, and the astounding invention of conveying thought by the electric fluid, are all means by which is promoted the great end of the unity of the human family.

Having thus briefly spoken of the statistics of commerce, I shall offer some observations on the laws which regulate and protect mercantile transactions. The enormous trade above-described is the result of the exertions of man stimulated by want to barter the products of his industry for the fruits of the earth, or for other articles useful to him. From this arise numberless relations, and thence corresponding rights and duties, which it is the business of mercantile law to define and establish. These rights and obligations result, in most cases, from the natural law of right and wrong, and, in some cases, from positive laws, such as the age at which men enter into capacity to contract, the forms established for the validity of contracts, &c. Positive laws, however, form but a small proportion of the body of mercantile law; and natural laws, founded on principles of universal application, are the same at all times and in all states. Accordingly, the various codes of commerce which define such principles do exhibit a striking similarity in their requirements; but, owing to the differences of languages, to the various systems of law, and to the various degrees of development of commercial jurisprudence, those great maxims are buried under the multiplicity of statements which produce a most injurious ignorance among the mercantile classes.

To prove the force of these statements, I call your attention to the number of articles contained in the various codes of commerce inserted in my work; but to appreciate their full value it must be borne in mind that in law every article has a peculiar force and bearing, and every word in every article modifies or changes the requirement of the law.

The law of Great Britain relating to merchants, partnerships, joint-stock companies, principal and agent, contracts, bills of exchange, insurance, shipping, and bankruptcy, contains 2,335 principles of common law, numerically arranged in the form of a code; and, moreover, there are 90 statutes bearing on mercantile law. The law of America inserted for these subjects has 817, but the common law of this country has not been as minutely set down as that of Great Britain. The entire Code of Commerce of France has 648 articles, that of Belgium the same, that of Spain 1,219, that of Holland 923,

that of Portugal 1,286, that of Wurtemburg 1,164, that of Hungary 575, that of Prussia 2,358, that of Russia 1,514, that of Sardinia 723, that of the Lombardo-Venetian Kingdom, 634, that of the Ionian Islands 608, that of the Two Sicilies 711; in all, 16,750 articles. To these must be added the law of Brazil, Denmark, Hamburg, Hanover, Sweden, Norway, Lubeck, Greece, and other small states, each of which has separate laws, and, moreover, various important portions of the Civil Codes of the various countries having relation to the law of partnerships, contract, and principal and agent.

Hence the merchant who is trading with the several countries becomes altogether ignorant of the laws which govern his transactions, and ignorant of those rights which the principles of justice secure to him. It is to meet these inconveniences that it becomes important to promote an International Code of Commerce, namely, a separate compilation of all those great principles of universal application to be adopted and enacted by Great Britain and other countries in the form of a code.

The best mode of arriving at this seems to be to have a conference of deputies commissioned by the various Governments, first to discuss the subject on its general merits, then to constitute a Committee out of the body to examine the various laws of commerce, and to divide those which are identically the same from those which, by the position of countries or other causes, differ. This division will, in itself, render the labour easier and clearer. Afterwards, mould all those laws which are similar in their provision into one general system, and recommend it for the adoption of the respective legislatures.

It is not desirable that I should enter more minutely into the benefits arising from such a plan, but I shall simply state that the promotion of it is attended with considerable good. It leads the public mind to the simplification of the law; it awakens a lively interest in the better administration of justice at home and abroad, and it may be the means of drawing closer the ties of friendship between nations, by removing one more of those trammels which still hinder universal progress. International law is, moreover, the basis upon which the mutual rights of nations are founded—a barrier to usurpation in times of war—a happy bond of justice in times of peace.

I am happy to learn that it is contemplated to hold a convention of statisticians of all countries next autumn at Brussels, in order to consult as to the best means of arriving at an equal system of collecting statistics, and that every facility has already been granted by the Government of Belgium, should such a convention be held. I trust your society will countenance it by sending a deputation to assist the promotion of so great a desideratum.

The Brussels' conference might appropriately discuss and promote the subject of international law, and prepare the ground for a determined line of action. Witnessing, as we have done, the magnificent results of the great Exhibition—experiencing, as we have, the happiness of drawing into one centre men of all nations, the produce of all countries, and inventions of every description, forsaking rivalry and jealousy—we are authorized to make that our starting-point, and, with progress and advancement for our motto, promote objects still higher and nobler.

Statistics of the Attendance in Schools for Children of the Poorer Classes.

By Joseph Fletcher, Esq.

[Read before the Statistical Section of the British Association at Ipswich, July, 1851.]

This was an elaborate abstract of the attendance, ages, and instruction of the children, in about 160 schools, two-thirds British, and one-third Wesleyan, inspected with reference to the apprenticeship of pupil teachers, in the course of the year 1850. Their experience is that of the best class of town schools for the poorer classes; those which are merely infant schools being excluded from the abstract, while the attendance of those included in it is chiefly from the families of skilled artizans and small shopkeepers. The number entered upon the books within the twelve months preceding the date of inspection, was, in 139 schools, 13,728, and the number erased from them 10,989; shewing a decided tendency to increase with the increasing power of instruction supplied by the pupil teachers, but a lamentable amount of fluctuation; the new admissions amounting to 84 per cent., and the withdrawals to 64 per cent. upon the number in ordinary attendance.

Abstract of the Fluctuations in the School Population.

Average Number in each class of Schools.	Boys.	Girls.	Mixed.	All.
Admitted within the last 12 months	113	85	92	99
Left within the last 12 months	96	68	65	79
In ordinary attendance	134	105	108	118
Present at examination	129	101	100	112
Per-centages on Average of Ordinary Attendances.				
Admitted within the last 12 months	84·3	81·0	85·2	84·0
Left within the last 12 months	71·6	64·8	60·2	67·0
Present at examination	96·3	96·2	92·6	95·0

The excessive fluctuation indicated by this table, affects chiefly the lower half of each school, where the inferior quality of the instruction which has heretofore prevailed has almost justified the indifference of the parents which this irregularity of attendance indicates.

Abstract of the Ages of the Children in 142 *Schools, exclusive of Infant Schools, and containing* 20,399 *Children.*

Average Number of an Age.	Boys.	Girls.	Mixed.	Total.
Not exceeding 7	49	41	42	45
7 „ 8	24	18	16	20
8 „ 9	25	16	17	20
9 „ 10	23	16	15	18
10 „ 11	18	12	14	15
11 „ 12	12	10	12	11
12 „ 13	8	8	8	8
13 „ 14 and upwards	6	8	9	8
Total	165	129	133	145

	Boys.	Girls.	Mixed.	Total.
Per-centage on Total Number.				
Not exceeding 7	30·1	31·9	32·0	31·1
7 „ 8	15·0	13·6	12·4	13·9
8 „ 9	15·1	12·4	13·1	13·9
9 „ 10	13·9	12·4	11·9	12·9
10 „ 11	10·9	10·0	10·2	10·4
11 „ 12	7·2	8·3	8·7	7·9
12 „ 13	4·5	6	5·2	5·1
13 „ 14	3·3	5·4	6·5	4·8

Thus, one-third of the children in the schools which are not reckoned as infant schools, are of the infantile ages, not exceeding 7; while only 4·8 per cent. are upwards of 13, and only 9·9 per cent., including these, upwards of 12 years of age. This latter, therefore, may be considered to be the age at which the children of artizans generally cease to attend any day-school, a large proportion of those above that age being the children of parents of rather superior means. The relative excess of boys at the younger, and girls at the more advanced ages, is referable to the earlier usefulness of the latter at home; and the fact that a larger proportion of a somewhat higher class are generally to be found protracting their stay in the girls' than in the boys' schools. The children of the unskilled labourers being seldom allowed to attend school to ages ranging so late as those returned in the preceding table, it is obvious that there is no opportunity for the over-education of the people by the day-schools, let them be made ever so vigorous; while the following table of the school occupations of the above 20,399 children, enjoying the best advantages of any in their station of life, will further evince how fallacious is any apprehension of such a result.

Thus, in this highest class of schools for the children of the poorer classes, there is only about $8\frac{1}{2}$ per cent. whose occupation, in writing abstracts or compositions, and in learning the rules of proportion and practice, indicate their advancement beyond the merest elements of reading, writing, and counting; while only 5·3 per cent. work in fractions, 1·9 per cent. are making the first steps in geometry, and 1·4 per cent. in algebra. A large proportion of these more advanced scholars are of the middle classes, to whose children this amount of instruction has heretofore been almost entirely restricted; and the greater part of that which is designated as grammar, geography, and history, in the accompanying table, is really of a character to invalidate the figures which describe the proportions receiving instruction in these branches.

Abstract of the Per-centage Proportions of the preceding 20,399 *Children, returned as receiving Instruction in each of the following subjects, in* 161 *Schools.*

Branches of Instruction.		Boys.	Girls.	Mixed.	All.
Letters and Monosyllables		22·1	26·2	25·9	24·3
Easy Narratives		30·9	31·8	26·4	29·9
Holy Scriptures		58·2	52·8	47·3	53·7
Books of General Information		50·5	36·0	43·5	44·7
Writing on Slates.	From Copies	41·8	50·5	34·6	41·9
	,, Notation or Memory	39·7	27·6	30·7	33·9
	,, Abstracts or Composition	15·6	4·5	10·3	11·2
Writing on Copies.	,, Copies	65·1	47·4	58·5	58·5
	,, Abstracts or Composition	10·1	6·3	7·9	8·4
Arithmetic	Numeration or Notation	21·3	20·2	16·5	19·7
	Addition, Subtraction, and Multiplication	23·7	26·1	24·6	24·6
	Division	19·1	14·6	17·1	17·3
	Compound Rules and Reduction	20·2	15·8	14·6	17·5
	Proportion or Practice	11·7	3·4	8·5	8·6
	Fractions and Decimals	8·1	·1	5·8	5·3
Grammar		50·5	36·1	36·4	42·7
Geography		59·0	43·5	51·4	52·7
History		30·0	18·9	19·3	24·0
Vocal Music from Notes		17·9	7·2	7·4	12·1
Linear Drawing		16·8	....	5·0	9·0
Geometry		3·7	....	1·1	1·9
Mensuration		4·9	....	3·8	3·2
Algebra		2·4	....	1·2	1·4
Sewing or Knitting		....	76·0	....	....

On the Vital and Medical Statistics of Chittagong. By J. R. Bedford, *Civil Assistant-Surgeon.*

[Read before the Statistical Society of London, 19th April, 1852.]

Registration of Births, Deaths, and Marriages, in Chittagong, from May 1, 1848, *to March* 31, 1849.

This registration was effected through the kind and zealous co-operation of the then acting magistrate, Mr. Buckland. It was strictly limited to the well-defined boundaries of the town mohullas, and obtained through the agency of the chokeydars, who were directed to appear every morning, upon the termination of their watch, before an officer appointed for the purpose, and to inform him of any birth, death, or marriage, which had occurred within their jurisdiction during the preceding twenty-four hours. Whilst directed to gain all possible information upon these points, they were strictly prohibited from exercising any inquisitorial powers. As fifty houses constitute the limit of each man's charge, there was no great difficulty in acquiring a knowledge of all such important domestic events as formed our subject of inquiry. The intelligence thus afforded, and which

likewise comprehended the nature of fatal cases, (for the classification adopted, it was quite sufficient to obtain the broad distinctions of disease such as are well understood amongst natives of Bengal,) as well as the age and sex of their subjects, was immediately recorded. This document was forwarded every week to the town dispensary, scrutinized by myself and Baboo Buddoo nath Brimo, the sub-assistant surgeon, to whose intelligence and activity in the work the greatest praise is due; and on the termination of each month, tabulated into English, according to the model of the reports issued by the Registrar-General of England. Constantly in the habit of driving through all portions of the native town, and visiting such of the sick as desired my presence, I had sufficient opportunity of checking the chokeydars' statements.

I have, therefore, every reason to believe that the following tables approximate very closely to the truth, not only numerically, but also in the classification of disease. Before, however, we can rightly estimate their bearing, it is necessary to say a few words regarding the population and physical aspect of Chittagong.

A census of the town mohullas, recorded in the magistrate's office, gives 17,152 as the number of the population. Another in the Bengal and Agra Gazetteer, going somewhat more into detail, states it to be 24,490. In both, the sexes are not distinguished. Under this discrepancy, I have assumed the population to be 20,000, being not far from the mean of the two statements, and a simple number.

The town comprehended within the registration limits, stretches for about two miles along the right bank of the Kurimfulee River, which forms its southern boundary, and has a tidal rise and fall of about thirteen feet, averaging a width of half a mile. The sea is distant, in a straight line, about four miles. On its eastern and northern sides, it is encircled by a succession of picturesque hills, averaging eighty feet in height, covered with grass and low jungle. To the west, between it and the sea, there is an uninterrupted stretch of small villages, rice-grounds, and fruit-tree jungle. The total area of the Sudder station and town amounts to 3,274 acres, divided as follows:

Township of Chittagong, in Acres.

Cultivation.	Waste Land.	Jungle.	River.	Tanks.	Roads.	Total.
2170	7	602	83	251	161	3274

but of the 602 acres, under the head "jungle," 278 form the cantonments, and should rather be entered "waste land."

The "cultivation" consists chiefly of rice.

The 251 acres occupied in tanks, which are no less than 522 in number, constitute a surface of stagnant water, presenting one mass of green vegetable matter. To these unhealthy looking pools, the receptacle of all the neighbouring filth, the inhabitants, on account o their proximity, almost constantly resort for drinking and cooking pur-

poses, in preference to the many limpid springs which exist in the neighbourhood of the hills.

Besides the elevations forming the eastern and northern boundaries of the town, there is a ridge running parallel with, and about a quarter of a mile from the river. Along the intermediate strip, is found by far the larger proportion of native houses. Upon the summits of the ridge are situated the residences of the Europeans, commanding purity of air and picturesqueness of view.

Pucka houses are very few in number; the town chiefly consisting of the ordinary Bengal huts, raised generally about a foot above the surface, by a mud flooring. It is difficult to estimate the exact amount of evil exercised upon the health of a Bengal peasant, by the peculiar nature of his dwelling, but I apprehend he is more favourably situated than the poorest class of residents in English cities.

The soil is universally sandy, excepting immediately upon the river, and retains moisture a very short time. Several small tidal nullahs, of an exceedingly filthy character, traverse the town; but they are so flanked by houses, that effectual cleansing is almost impossible.

Drainage there is none, except of a natural character. Fruit and other trees abound in all directions, so much so, indeed, that in ascending any distant height, not a house can be seen, but the whole town bears the appearance of one wide expanse of jungle. The average force of the wind is so considerable, that these trees offer little obstruction to ventilation; their leaves, however, collecting numerously in the capacious ditches, and decomposing in their humidity, doubtless cause a very large proportion of the fevers to which the inhabitants become martyrs in the autumn quarter of the year. This would seem to have been illustrated by the fever which attacked almost every one, after the hurricane of April, 1849, in which trees were thrown down in all directions, and the town became one mass of vegetable débris. So thoroughly impregnated did the atmosphere become on this occasion, that its fatal influence reached the summits of the hills, affecting many of the European officers. Another pregnant source of disease, is the vicious custom which prevails amongst Mussulmans, of every corpse being buried within the family compound, thus constituting the town a large grave-yard.

Provisions are cheap in Chittagong, salt is universally consumed, and every man may be said to have a sufficiency. The clothing of the great majority consists of cotton cloth, and perchance a blanket in the cold season.

It would thus appear that as regards soil, dwellings, food, clothing, and ventilation, the inhabitants of Chittagong are favourably situated, whilst on the other hand the large vegeto-aqueous surface, impure water, and surrounding vegetable decomposition, are likely to exercise a most injurious influence upon them.

Tabular Statement of Births, Deaths, and Marriages, in Chittagong, from May 1st to 31st, 1848.

Classes of Diseases.	Male.					Female.					Age.																													
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	„ 2.	„ 3.	„ 4.	„ 5.	„ 6.	„ 7.	„ 8.	„ 9.	„ 15.	„ 20.	„ 25.	„ 30.	„ 35.	„ 40.	„ 45.	„ 50.	„ 55.	„ 60.	„ 65.	„ 70.	„ 75.	„ 80.	„ 85.	„ 90.	„ 95.	„ 100.	Total.
1. Zymotic Diseases	4	12	...	...	16	2	3	...	...	5	8	2	2	2	2	1	1	1	1	2	1	2	2	2	2	5	...	1	1	2	...	1	2	1	...	...	...	44
2. Dropsy, Cancer, &c.	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Diseases of Brain and Spinal Marrow	1	1	...	...	2	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Diseases of Respiration	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. „ Digestion	3	5	...	1	9	1	3	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. „ Spleen	1	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Cholera	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	9	22	...	1	32	3	9	...	...	12																													
Single Births	...	11	...	4	15	4	17	...	...	21																													
Marriages	1	20	1	...	22	...	...	...	...	...																													

Grand Total—Deaths 44. Births 36. Marriages 22.

Population of Town 20,000. Monthly { Ratio of Deaths ·22 ; „ Births ·18 ; „ Marriages ·11 } Per Cent.

Tabular Statement of Births, Deaths, and Marriages, in Chittagong, from June 1st to 30th, 1848.

Classes of Diseases.	Male.					Female.					Age.																													
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	„ 2.	„ 3.	„ 4.	„ 5.	„ 6.	„ 7.	„ 8.	„ 9.	„ 15.	„ 20.	„ 25.	„ 30.	„ 35.	„ 40.	„ 45.	„ 50.	„ 55.	„ 60.	„ 65.	„ 70.	„ 75.	„ 80.	„ 85.	„ 90.	„ 95.	„ 100.	Total.
1. Zymotic Diseases	3	8	...	1	12	3	7	...	...	10	3	3	1	...	...	...	1	3	1	1	2	4	3	1	4	6	1	2	1	4	...	2	...	...	...	...	...	43
2. Dropsy, Cancer, &c.	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Diseases of Brain and Spinal Marrow	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Diseases of Respiration	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. „ Digestion	...	2	...	...	2	2	8	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. „ Spleen	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Cholera	...	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Diseases of Childbirth	...	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	5	12	...	1	18	5	18	...	2	25																													
Single Births	2	13	...	3	18	1	22	...	...	23																													
Marriages		2			2																																		

Grand Total—Deaths 43. Births 41. Marriages 2.

Population of Town 20,000. Monthly { Ratio of Deaths ·2115 ; „ Births ·25 } Per Cent.

Classes of Diseases.	Male.					Female.					Age.																													
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	2.	3.	4.	5.	6.	7.	8.	9.	15.	20.	25.	30.	35.	40.	45.	50.	55.	60.	65.	70.	75.	80.	85.	90.	95.	100.	Total.
1. Zymotic Diseases	3	8	...	...	11	2	11	...	...	13	3	4	3	1	1	1	...	2	5	1	...	4	1	5	...	4	...	...	1	2	1	1	1	1	1	...	...	43
2. Dropsy, Cancer, &c.	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Diseases of Brain and Spinal Marrow	...	2	...	...	2	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Diseases of Respiration	...	1	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. „ Spleen	1	...	...	...	1	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. „ Digestion	1	1	...	...	2	...	4	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. „ Children	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. „ Childbirth	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Syphilis	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	6	13	...	...	19	2	22	...	...	24																													
Single Births	3	10	...	1	14	3	13	...	1	17																														
Twin „	...	1	...	...	1	...	...	...	...	...																														
Marriages	...	3	...	2	5	...	...	...	...	...																														

Grand Total—Deaths 43. Births 32. Marriages 5.

Population of Town 20,000. Monthly { Ratio of Deaths ·2115 ; „ Births ·16 ; „ Marriages ·025 } Per Cent.

Tabular Statement of Births, Deaths, and Marriages, in Chittagong, from August 1*st to* 31*st*, 1848.

Classes of Diseases.	Male.					Female.					Age.																													
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	2.	3.	4.	5.	6.	7.	8.	9.	15.	20.	25.	30.	35.	40.	45.	50.	55.	60.	65.	70.	75.	80.	85.	90.	95.	100.	Total.
1. Zymotic Diseases	2	6	...	1	9	4	8	...	...	12	4	3	1	...	...	1	2	1	...	3	2	3	2	3	2	1	3	1	2	3	3	...	1	...	...	...	...	42
2. Dropsy, Cancer, &c.	1	2	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Diseases of Brain, &c.	...	2	...	...	2	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. „ Digestion	...	6	...	...	6	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. „ Skin, &c.	1	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. „ Children	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Cholera	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Diseases of Old Age	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	4	17	...	1	22	5	15	...	...	20																													
Single Births	...	11	...	1	12	4	6	...	...	10																														
Marriages	...	4	...	2	6	...	...	...	...	...																														

Grand Total—Deaths 42. Births 22. Marriages 6.

Population of Town 20,000. Monthly { Ratio of Deaths ·21 ; „ Births ·11 ; „ Marriages ·03 } Per Cent.

Tabular Statement of Births, Deaths, and Marriages, in Chittagong, from September 1st to 30th, 1848.

Classes of Diseases.	Male.					Female.					Age.																							
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	2.	3.	4.	5.	6.	7.	8.	9.	15.	20.	25.	30.	35.	40.	45.	50.	55.	60.	65.	70.	75.	80.	85.	90.	95.	100.	Total.
1. Zymotic Diseases	1	2	...	...	3	1	6	...	...	7	5	1	1	...	...	...	1	...	...	2	...	3	...	3	1	3	1	2	...	1	...	...	1	1	...	...	...	26
2. Dropsy, Cancer, &c.	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Diseases of Brain	...	3	...	...	3	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. „ Respiration	1	1	...	...	2	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. „ Digestion	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. „ Spleen	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. „ Childbirth	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Cholera	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Snake-bite	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	2	10	...	...	12	3	10	...	1	14																										
Single Births	1	15	...	...	16	3	7	...	...	10																										
Twin „	...	1	...	...	1	...	...	...	...	...																										
Marriages	...	2	...	1	3	...	...	...	...	...																										

Grand Total—Deaths 26. Births 27. Marriages 3.

Population of Town 20,000. Monthly { Ratio of Deaths ·13 ; „ Births ·135 ; „ Marriages ·015 } Per Cent.

Tabular Statement of Births, Deaths, and Marriages, in Chittagong, from October 1st to 31st, 1848.

Classes of Diseases.	Male.					Female.					Age.																							
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	2.	3.	4.	5.	6.	7.	8.	9.	15.	20.	25.	30.	35.	40.	45.	50.	55.	60.	65.	70.	75.	80.	85.	90.	95.	100.	Total.
1. Zymotic Diseases	1	7	...	...	8	...	5	...	...	5	10	2	...	...	2	...	2	...	...	2	4	3	4	1	...	2	1	1	...	1	...	1	1	2	...	...	...	39
2. Diseases of Brain, &c.	...	2	...	...	2	...	2	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. „ Respiration	...	...	...	...	...	1	...	..	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. „ Digestion	4	6	...	1	11	...	3	...	2	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. „ Spleen	...	2	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Snake-bite	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	6	17	...	2	25	1	10	...	3	14																										
Single	2	6	1	3	12	3	18	...	3	24																										

Grand Total—Deaths 39. Births 36. Marriages 8.

Ratio of Deaths ·195

Tabular Statement of Births, Deaths, and Marriages, in Chittagong, from November 1st to 30th, 1848.

Classes of Diseases.	Male.					Female.					Age.																																
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	„ 2.	„ 3.	„ 4.	„ 5.	„ 6.	„ 7.	„ 8.	„ 9.	„ 15.	„ 20.	„ 25.	„ 30.	„ 35.	„ 40.	„ 45.	„ 50.	„ 55.	„ 60.	„ 65.	„ 70.	„ 75.	„ 80.	„ 85.	„ 90.	„ 95.	„ 100.	Total.
1. Zymotic Diseases	1	7	...	1	9	2	7	...	1	10	3	...	2	...	1	4	2	1	...	7	1	4	2	6	2	7	4	...	3	2	...	1	...	4	...	...	1	57
2. Dropsy, Cancer, &c.	...	1	...	1	2	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Diseases of Brain, &c.	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. „ Respiration	1	2	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. „ Digestion	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. „ Spleen	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Cholera	7	12	...	...	19	3	6	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	9	25	...	2	36	5	15	...	1	21																													
Single Births	4	16	...	2	22	3	8	...	1	12																													
Marriages	...	10	...	2	12	...	...	...	...	...																													

Grand Total—Deaths 57. Births 34. Marriages 12.

Population of Town 20,000. Monthly { Ratio of Deaths ·285 ; „ Births ·17 ; „ Marriages ·06 } Per Cent.

Tabular Statement of Births, Deaths, and Marriages, in Chittagong, from December 1st to 31st, 1848.

Classes of Diseases.	Male.					Female.					Age.																																
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	„ 2.	„ 3.	„ 4.	„ 5.	„ 6.	„ 7.	„ 8.	„ 9.	„ 15.	„ 20.	„ 25.	„ 30.	„ 35.	„ 40.	„ 45.	„ 50.	„ 55.	„ 60.	„ 65.	„ 70.	„ 75.	„ 80.	„ 85.	„ 90.	„ 95.	„ 100.	Total.
1. Zymotic Diseases	4	3	...	1	8	3	11	...	...	14	4	1	1	2	1	1	3	1	1	8	1	4	2	4	7	4	5	...	6	1	3	1	2	...	...	...	...	63
2. Diseases of Respiration	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. „ Digestion	1	3	...	...	4	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Cholera, Spasmodic	1	10	...	1	12	...	17	...	...	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Diseases of Childbirth	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. „ Children	...	...	...	...	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	6	16	...	2	24	4	35	...	...	39																													
Single Births	1	5	...	1	7	1	6	...	...	7																													
Marriages	...	5	...	...	3	...	...	...	...	...																													

Grand Total—Deaths 63. Births 14. Marriages 3.

Population of Town 20,000. Monthly { Ratio of Deaths ·315 ; „ Births ·07 ; „ Marriages ·015 } Per Cent.

Tabular Statement of irths, Deaths, and Marriages, in Chittagong, from January 1st to 31st, 1849.

Classes of Disease.	Male.					Female.					Age.																													
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	2.	3.	4.	5.	6.	7.	8.	9.	15.	20.	25.	30.	35.	40.	45.	50.	55.	60.	65.	70.	75.	80.	85.	90.	95.	100.	Total.
1. Zymotic Diseases	5	6	...	...	11	1	7	...	2	10	2	1	1	...	1	...	...	3	1	3	3	4	3	1	4	1	3	...	5	1	1	3	2	...	...	1	...	44
2. Diseases of Respiration	...	1	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Cholera, Spasmodic	2	8	...	...	10	...	4	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Diseases of Spleen	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. „ Children	...	2	...	...	2	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Drowning	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Anomalous	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	7	19	...	1	27	1	14	...	2	17																													
Single Births	2	12	...	...	14	1	8	...	...	9																													
Marriages	...	2	...	2	4	...	...	...	...	...																													

Grand Total—Deaths 44. Births 23. Marriages 4.

Population of Town 20,000. Monthly { Ratio of Deaths ·22 ; „ Births ·115 ; „ Marriages ·02 } Per Cent.

Tabular Statement of Births, Deaths, and Marriages, in Chittagong, from February 1st to 28th, 1849.

Classes of Disease.	Male.					Female.					Age.																													
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	2.	3.	4.	5.	6.	7.	8.	9.	15.	20.	25.	30.	35.	40.	45.	50.	55.	60.	65.	70.	75.	80.	85.	90.	95.	100.	Total.
1. Zymotic Diseases	...	2	...	1	3	2	7	...	1	10	3	1	...	...	1	...	...	...	...	1	4	3	4	2	1	...	5	2	2	...	1	...	4	...	...	...	...	34
2. Diseases of Respiration	...	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. „ Digestion	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Cholera, Spasmodic	1	5	...	...	6	4	3	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Diseases of Children	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Drowning	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Poisoning	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	3	8	...	2	13	7	12	...	2	21																													
Single Births	2	12	...	...	14	1	8	...	...	9																													
Marriages	3	12	...	1	16	...	...	...	...	...																													

Grand Total—Deaths 34. Births 23. Marriages 16.

Population of Town 20,000. Monthly { Ratio of Deaths ·17 ; „ Births ·115 } Per Cent.

Classes of Diseases.	Adults.					Children.					Age.																											
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Under 1.	2.	3.	4.	5.	6.	7.	8.	9.	15.	20.	25.	30.	35.	40.	45.	50.	55.	60.	65.	70.	75.	80.	85.	90.	95.	100.	Total.
												,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	
1. Zymotic Diseases	...	8	...	...	8	3	9	...	1	13	2	1	2	...	1	1	3	...	1	3	3	6	1	...	10	1	4	1	8	1	3	...	3	...	1	...	1	57
2. Diseases of Digestion	...	1	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Cholera, Spasmodic	6	12	...	...	18	2	9	...	...	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Dis. of Childbirth	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. ,, Spleen	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. ,, Urinary Organs	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Anomalous	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Deaths	7	21	...	...	28	6	22	...	1	29																												
Single Births	1	7	...	4	12	1	8	...	2	11																												
Marriages	1	13	...	...	14	...	...	...	...	...																												

Grand Total—Deaths 57. Births 23. Marriages 14.

Population of Town 20,000. Monthly { Ratio of Deaths ·285 ,, Births ·115 ,, Marriages ·07 } Per Cent.

Tabular Statement of Deaths in the Town of Chittagong, from May 1st, 1848, to March 31st, 1849.

Number.	Classes of Disease.	Male.					Female.					Grand Total.
		Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	
1	Zymotic, or Epidemic, Endemic, and Contagious Diseases	24	69	...	5	98	23	81	...	5	109	207
2	Dropsy, Cancer, and Diseases of uncertain seat	2	6	...	1	9	...	2	...	...	2	11
3	Diseases of Spinal Marrow, Brain, Nerves, and Senses	1	12	...	...	13	1	8	...	1	10	23
4	,, Respiration	2	8	...	...	10	1	6	...	2	9	19
5	,, Stomach, Liver, and other Organs of Digestion	10	27	...	2	39	3	23	...	2	28	67
6	,, Genito-Urinary System	1	...	...	...	1	...	...	...	...	...	1
7	Childbirth, Diseases of Uterus, &c.	...	...	...	...	...	2	5	...	1	8	8
8	Diseases of Children	...	3	...	...	3	2	6	...	...	8	11
9	,, Spleen	3	3	...	1	7	2	5	...	...	7	14
10	,, Skin, Cellular Tissue, &c.	1	...	...	...	1	...	1	...	...	1	2
11	,, Syphilis	...	...	...	...	...	...	2	...	...	2	2
12	,, Old Age	...	...	...	...	...	...	1	...	...	1	1
13	Drowning	1	1	...	1	3	...	...	...	...	...	3
14	Poisoning	...	...	...	1	1	...	...	...	...	...	1
15	Anomalous	...	...	...	...	...	...	2	...	...	2	2
16	Snake-bite	1	1	...	...	2	...	...	...	...	...	2
17	Cholera Spasmodica	17	50	...	1	68	9	40	...	1	50	118
	Total	63	180	...	12	255	43	182	...	12	237	492

Tabular Statement of the Age of those Dying in the Town of Chittagong, from May 1*st to March* 31*st*, 1849.

Age.																												
Under 1.	2.	3.	4.	5.	6.	7.	8.	9.	15.	20.	25.	30.	35.	40.	45.	50.	55.	60.	65.	70.	75.	80.	85.	90.	95.	100.	Total.
„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	„	
47	19	14	5	10	9	15	12	10	33	21	40	24	28	33	34	27	11	29	18	12	10	17	9	2	1	2	492

Annual Ratio of Deaths per cent. of population, 2·6880.

Tabular Statement of Deaths, in reference to Age, showing the Mortality in each Month, from May 1*st*, 1848, *to March* 31*st*, 1849.

Months.	Age.																											
	Under 1 Year.	2 „	3 „	4 „	5 „	6 „	7 „	8 „	9 „	15 „	20 „	25 „	30 „	35 „	40 „	45 „	50 „	55 „	60 „	65 „	70 „	75 „	80 „	85 „	90 „	95 „	100 „	Total.
May	8	2	2	2	2	1	1	1	1	2	1	2	2	2	2	5	..	1	1	2	..	1	2	1	..	..	..	44
June	3	3	1	..	..	..	1	3	1	1	2	4	3	1	4	6	1	2	1	4	..	2	..	..	..	..	..	43
July	3	4	3	1	1	1	..	2	5	1	..	4	1	5	..	4	..	..	1	2	1	1	1	1	1	..	..	43
August	4	3	1	..	..	1	2	1	..	3	2	3	2	3	2	1	3	2	2	3	3	..	1	..	..	..	..	42
September ..	5	1	1	..	..	..	1	..	..	2	..	3	..	3	1	3	1	2	..	1	..	..	1	1	..	..	..	26
October	10	2	..	..	2	..	2	..	..	2	4	3	4	1	..	2	1	1	..	1	..	1	1	2	..	..	..	39
November ..	3	..	2	..	1	4	2	1	..	7	1	4	2	6	2	7	4	..	3	2	..	1	..	4	..	..	1	57
December ..	4	1	1	2	1	1	3	1	1	8	1	4	2	4	7	4	5	..	6	1	3	1	2	..	..	..	..	63
January....	2	1	1	..	1	..	..	3	1	3	3	4	3	1	4	1	3	..	5	1	1	3	2	..	..	1	..	44
February ..	3	1	..	..	1	..	..	..	..	1	4	3	4	2	1	..	5	2	2	..	1	..	4	..	..	..	..	34
March	2	1	2	..	1	1	3	..	1	3	3	6	1	..	10	1	4	1	8	1	3	..	3	..	1	..	1	57
	47	19	14	5	10	9	15	12	10	33	21	40	24	28	33	34	27	11	29	18	12	10	17	9	2	1	2	492

Tabular Statement of Births in the Town of Chittagong, showing the Number in each Month from May 1st, 1848, to March 31st, 1849.

Months.	Single Births.										Twin Births.										Grand Total.
	Male.					Female.					Male.					Female.					
	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	Hindoo.	Mussul.	Muggs.	Christian.	Total.	
May	....	11	....	4	15	4	17	....	....	21	....	....	....	....	....	....	....	....	....	....	36
June	2	13	....	3	18	1	22	....	....	23	....	....	....	....	....	....	....	....	....	....	41
July	3	10	....	1	14	3	13	....	1	17	....	1	....	....	1	....	....	....	....	....	32
August	....	11	....	1	12	4	6	....	....	10	....	....	....	....	....	....	....	....	....	....	22
September	1	15	....	....	16	3	7	....	....	10	....	1	....	....	1	....	....	....	....	....	27
October	2	6	1	3	12	3	18	....	3	24	....	....	....	....	....	....	....	....	....	....	36
November	4	16	....	2	22	3	8	....	1	12	....	....	....	....	....	....	....	....	....	....	34
December	1	5	....	1	7	1	6	....	....	7	....	....	....	....	....	....	....	....	....	....	14
January	2	12	....	....	14	1	8	....	....	9	....	....	....	....	....	....	....	....	....	....	23
February	2	12	....	....	14	1	8	....	....	9	....	....	....	....	....	....	....	....	....	....	23
March	1	7	....	4	12	1	8	....	2	11	....	....	....	....	....	....	....	....	....	....	23
Total	18	118	1	19	156	25	121	....	7	153	....	2	....	....	2	....	....	....	....	....	311

Annual Ratio of Births per cent. of Population, 1·730.

Tabular Statement of Marriages in the Town of Chittagong, showing the Number in each Month, from May 1st, 1848, to March 31st, 1849.

Months.	Hindoo.	Mussulman.	Muggs.	Christian.	Total.
May	1	19	....	1	21
June	....	2	....	....	2
July	....	3	....	2	5
August	....	4	....	2	6
September	....	2	....	1	3
October	....	6	....	2	8
November	....	10	....	2	12
December	....	3	....	....	3
January	....	2	....	2	4
February	3	12	....	1	16
March	1	13	....	....	14
Total	5	76	....	13	94

Annual Ratio of Marriages per cent. of Population, 0·585*.

1. *Zymotic Diseases.*—The diseases under this head were wholly fevers of the continued type. Not a single case of small-pox, or any other malady included under the head "zymotic" by the Registrar-General, occurred during the year. Whilst constructing the tables, I was unaware that diarrhœa and dysentery were in this category, and placed them under "diseases of digestive system." Even with the exclusion of cholera, diarrhœa, and dysentery, however, the proportion of this class of disease in enormously larger than obtains in England.

2. *Diseases of uncertain seat.*—3. *Diseases of Spinal Marrow.*—Of these, I can say but little. Most of the dropsy cases were the results of organic lesion.

4. *Diseases of Respiration.*—This class offers a very different proportion from the English returns. In London, during 1845, no less than 32·2 per cent. of the male deaths were due to it; whilst, according to the above tables, the Chittagong decrement of life, in both sexes, from the same cause, amounted to only 3·8 per cent. The difference is immense. An opinion has lately been gaining ground, that, in India, thoracic complaints are not uncommon. Such hypothesis is not borne out by these numerical results. It is true the propounders of such an opinion speak of it merely in connexion with the mortality of jails, whose inmates, doubtless, are subjected to influences differing from those which affect free populations.

5. *Diseases of Organs of Circulation.*—Under this head, no entries exist. If such occurred, they were probably too subtile for the reporting agents, and entered under some other class.

6. *Diseases of Digestive Organs.*—As this class contains diarrhœa and dysentery, of which indeed it is almost wholly composed, no

* Although these tables only contain the records of eleven months, I am enabled to give the annual ratios, from having a twelvemonth recorded, but which is not published from its having made no distinction between male and female deaths.

comparison can be instituted with the same in English registration tables, from which they are excluded.

7. *Diseases of Childbirth.*—Of the eight cases under this head, several were due to the act of parturition itself.

8. *Diseases of Children.*—This head, not to be found in English registration, is meant to include all those deaths under 12 years of age, to which no specific name could be given.

9. *Cholera.*—Comments upon the proportion of cholera-mortality would be of little value, as it is in this class that the chief source of error lies, from the dying being removed from the towns to their native village, and their death thus failing to be recorded.

The following table exhibits the proportion of mortality from each class of disease.

Ratio Per Cent. of each Class of Disease in Chittagong from May 1st, 1848, to March 31st, 1849.

Number.	Class of Disease.	Ratio per Cent. of all Diseases.
1	Zymotic (excluding Diarrhœa and Dysentery)	42·07
2	Diseases of uncertain seat	2·23
3	Do. of Spinal Marrow, &c.	4·67
4	Do. of Respiration	3·86
5	Do. of Digestion (including Diarrhœa and Dysentery)	13·61
6	Do. of Genito-Urinary System	·20
7	Childbirth, &c.	1·62
8	Diseases of Children	2·23
9	Do. of Spleen	2·84
10	Do. of Skin, &c.	·40
11	Syphilis	·40
12	Old Age	·20
13	Accidents	1·62
14	Cholera Spasmodica	23·98

It will be seen that in these tables I have inserted cholera and spleen disease (meaning by this term, enlargement of the organs) as separate items, unlike the abstract returns of registration in England. But this has been done in order to mark distinctly how large a proportion of mortality is due to these diseases. Let us compare the total results with those of England.

England, 1838–1845.		Chittagong, 1848–1849.	
	Per Cent. per Annum.		Per Cent. per Annum.
Births	3·218	Births	1·730
Marriages	1·570	Marriages	0·585
Deaths	2·175	Deaths	2·6880*

* The Native Mortality of Calcutta, in 1849, as ascertained from Dr. Stewart's interesting Tables, amounted to about 3·50; whilst Dr. Strong's average of sixteen years' observation is 4·57 for Mohamedans, and 5·66 for Hindoos.

The small proportion of marriages and births in Chittagong is owing to the circumstance of the female population being very limited. This is traceable to several circumstances, amongst which may be named the increase of male population by a large number of immigrant Amlah, (native government officers,) whose families are left at home in their native districts; and the bad repute of the town (a seaport) preventing respectable females from residing in it. The ratio of mortality is only slightly higher than that of England. It is below the truth, however; as many cases of severe disease, especially cholera, are removed in the last stage away from the town, to die in their native village. Were these fatal cases entered, I apprehend that the mortality would rise to about 3 per cent. Even this is very small for a people exposed to all the noxious influence of the tropics. How much it might become reduced, were effective sanitary measures adopted, is shown by the table containing "total number of deaths from each class of disease," by which it appears that no less than 207 out of 492 were of the zymotic class, and mostly fevers of malarious origin.

It may serve a useful purpose to analyze the causes of these deaths, with the view of ascertaining how many were due to preventible sources, and how many to circumstances beyond our control. It may fairly be asserted, that every disease affecting mankind is attributable to either—1. malarious emanation; 2. epidemic diffusion, and atmospheric alternation; 3. hereditary taint, human infection, and neglect of natural laws; or 4. accidents.

Let us classify all the 492 fatal cases according to this view, and ascertain how much life has been wasted.

		Number of Deaths.
1. Malarious Emanation, whether arising from Animal or Vegetable Decomposition	Zymotic Disease	207
	Diseases of the Spleen	14
		221

Under a perfect sanitary arrangement of the country, a great proportion of these lives might probably have been spared.

		Number of Deaths.
2. Epidemic Diffusion, or Atmospheric Alternation	Cholera	118
	Diseases of Respiration	19
	Diseases of Digestion	67
		204

Even admitting that cholera has no malarious character, we may safely assert that much of its influence is due to dirt and inattention to the natural laws. If so, it becomes in a great measure a preventible disease, and many, therefore, of the 118 lives have been sacrificed to ignorance or inattention. Diseases of respiration are clearly due to atmospheric change met by insufficient clothing, and might be effectually warded off. Diseases of digestion are partly due to atmospheric alternation, and partly to more subtle causes.

		Number of Deaths.
3. Hereditary Taint, Human Infection, and Neglect of Natural Laws	Dropsy, &c.	11
	Diseases of Spinal Marrow	23
	Do. of Urinary System	1
	Do. of Childbirth*	8
	Do. of Children	11
	Do. of Skin	2
	Do. of Old Age	1
	Syphilis	2
		59

Very few of these 59 fatal results could have been warded off by any exertion of the sufferers themselves, but much of the evil may possibly have been due to the errors of their parents.

4. Accidents	8

These deaths were of course not easily to be avoided.

It thus appears that we may safely class one-half of the whole mortality under the head of "preventible."

As the census contains no distinction between the castes and sexes, their special ratio of mortality cannot be deduced. It is remarkable however, to find so many as 237 female deaths, or nearly half the total, in a town said to contain a small proportion of women.

The excess of Mussulman over Hindu deaths is in accordance with the supposed comparative numbers of these religionists.

The Christian population is about 1,000,—hence their mortality would be 2 per cent.

The exceedingly small fatality of snake-bites claims attention: only 2 in a population of 20,000 during 12 months. The class of "zymotic disease" would appear to be more fatal here than in England, judging from the returns of London for the quarter ending September 30th, 1850, now lying before me. Out of 11,580 deaths in this period, 3,011 or 26 per cent. were due to zymotic causes, comprehending small-pox, measles, scarlet-fever, hooping-cough, &c. This variety is unknown in India. The fatal cases under the same head in Chittagong, amounting to 42 per cent., were almost universally due to continued fever alone.

A Bengalee is so ignorant upon the subject of his age, that the table of "age at death," must be received with caution. Experience has shewn me, however, that up to 10 years, mothers are well acquainted with their children's age; whilst for the subsequent existence, the periods of 5 years under which all have been arranged, are sufficiently wide to avoid great error. Out of the 492 Chittagong deaths in 11 months, 95 occurred under 5 years of age, or 19·3 per cent. Out of 48,332 London deaths, in 1845, 19,887 occurred under 5 years of age, or 41·1 per cent.

The difference of mortality under 5 years of age is very considerable between the two returns, but this may be owing to the small proportion of children in the population of Chittagong.

The annual tabular statement of deaths in each month exhibits great mortality in December. This, it will be seen, on referring to

* Excluding the act of parturition.

the monthly table, was due to cholera, of which disease no less than 29 cases occurred.

The quarters stand thus in their order of mortality, beginning at the most fatal.

1. Winter, ending last day of December.
2. Spring ,, ,, March.
3. Summer ,, ,, June.
4. Autumn ,, ,, September.

In England, by observations deduced from years 1838-1845, their order is as follows:—

1. Spring.	3. Winter.
2. Summer.	4. Autumn.

In the eighth Annual Report of the Registrar-General of England, it is said, "In the unhealthy countries of the world, the mortality is highest in the hottest months." Such a statement is not borne out by the fact before us.

The births and marriages being small in number, may be passed over without any further observation for the present.

Having introduced the tables of mortality, by offering a sketch of the topography of Chittagong, with the view of pointing out those causes which might seem to influence disease, the most fit conclusion to the subject will be in indicating where remedies may be found.

The native dwellings throughout the town are perfectly embosomed in trees, which are mostly of a fruit-bearing kind. These should not be touched, as any detriment which they may prove to ventilation is more than compensated for, by the protection afforded against the sun's rays. The Mydow tree should be an exception to this. It is perfectly useless, and chokes up the narrow roads in every direction. Whilst advocating, however, partial protection to the trees, their fallen leaves should be swept up into heaps by the compulsory labour of the inhabitants (every one being answerable for the cleanly state of the road before his door, as is the rule in England after heavy falls of snow), and carted off daily.

The 522 tanks now covered with green vegetation would require to be thoroughly cleansed, and their contents not plastered along the edge, as is usually done, but burnt at once, or carted off for manure. They might be made not only useful, but pleasing to the eye, by having the banks sloped and turfed. It may be alleged, that the amount of convict labour at the magistrate's disposal is insufficient to effect this. Why should such agency be employed? I am clearly of opinion, that Act XXI, section 1-2, of 1841, empowering the magistrates to make the removal of local nuisances compulsory upon the authors of them, is applicable to dirty tanks. Such collections of water invariably have owners who jealously guard their rights, such as fishery, &c. The possession of rights implies the obligation of duties, one of the most important of which is to prevent their property from becoming a local nuisance, and detrimental to the health of the surrounding residents.

The consideration of tanks naturally leads to the inquiry as to how these reservoirs, originally intended for the purpose of supplying pure water for drink and bathing, can be preserved free from defile-

ment. Every resident of a mofussil station is painfully aware how every spare corner of land and water becomes offensive from the dirty customs of the inhabitants; and this not so much from any innate impurity, as from want of convenience. To remedy this evil, I would suggest the formation of wells, 50 feet in depth by 6 in diameter, to every 200 inhabitants, in convenient parts of the town, distinguishing those for the sexes. These should be covered in with a grating, surrounded with a high hedge, and bricked up when full. A sweeper should visit them twice a day, for the purpose of throwing in lime, or some of the deodorizing liquids now in use in England. As all the respectable classes use the interior of their dwellings, there would be no hardship in making resort to these wells compulsory, and punishing any departure from the custom under the already-quoted Local Nuisance Act. To defray the expense of such improvements, we have the surplus chokeydaree fund, and the 75 per cent., or profits of jail manufactures, which might suffice gradually to effect them in those sudder stations not possessing a municipal committee. The chief difficulty in the applications of these funds, however, to sanitary purposes, is in the present delay in their disposal, owing to the circuitous correspondence attendant upon any demand for their expenditure. The civil surgeon must first suggest the desired improvement to the magistrate, the latter officer must obtain estimates from the executive officer, and the whole question is then referred to government, which, from the amount of work with which it is burthened, may not give a final sanction, until such time as the original movers shall have quitted the station. To obviate this delay, I would most strongly urge that, in every sudder station not possessing a municipal committee, and where in consequence the only funds available are those I have named, the magistrate, civil surgeon, and executive officer should form a sanitary committee, presided over by a commissioner or judge, which should possess the summary power of disposing of the above funds, merely rendering to Government an annual account of their appropriation. Without this immediate power of expenditure being delegated to one or more officers in a station, I feel assured that all attempts at sanitary reform must fail. Lengthened correspondence damps zeal, and the favourable opportunity is suffered to pass away.

As the ditches form the only drains, their freedom from obstructions, and regularity of level, is a most important consideration. The ordinary rule of our mofussil stations seems to be, to form a ditch simply for the purpose of elevating the adjoining road, and without the slightest reference to drainage. This, to be effectually attained, requires a system of levels. An inspection should be made every morning, and all filth carefully removed. Chittagong may fairly claim a pre-eminence for smells, and be entitled the Cologne of the East. They abound in all directions. I would undertake to give any man a fever, in fifteen minutes, by driving him slowly through one of the narrow lanes, with thick jungle and green tanks on either side, and a basket of stinking fish in front.

The present mode of burials among the Mussulmans is most objectionable. Every corpse is interred in the compound of his house, with a few inches of earth thrown over it, thus converting the whole town into one vast Golgotha. Mr. Buckland made an energetic attempt to

remedy this evil, but the consequent clamour restored the old custom. There should be a piece of ground set apart by government in every station for Mussulman sepulture, and interments allowed in no other place. The more respectable families might still enjoy privacy for their tombs, by being permitted to enclose a small space from the public ground. The common existence of extensive cemeteries in a ruined state, in all the old Mussulman cities, proves the former existence of such a custom.

The cremation practised by the Hindus, is by far the most desirable mode of disposing of the dead in use amongst any people, if perfectly performed. The half-consumed state in which bodies are permitted to float down the river is most injurious to the purity of the atmosphere, and sickening to the sight. I venture to prophecy that, in twenty years time, the fact of festering bodies having been allowed to poison the Hooghly, by becoming entangled in the shipping, or by being thrown on shore in the immediate neighbourhood of the residents of Garden Reach, will be considered incredible.

At Chittagong, the burning-ghaut was well conducted, and being situated away from the town, exercised, I apprehend, no injurious influence.

How are these evils to be remedied? By putting the Municipal Act in force, and levying a light assessment for the purchase of labour; or in default of this, by government sanctioning the sanitary committee above adverted to, and, above all, employing some active European or non-commissioned officer, if possible, in directly superintending the condition of the town. His duty should consist in visiting every hole and corner once a day, ferreting nuisances and directing their summary removal. His immediate superior would be the secretary of the municipal or sanitary committee, to whom should be delegated by the magistrate full power in sanitary questions. Reforms such as these would remove the causes known to produce a prejudicial influence upon health, and reduce the mortality of zymotic disease to a small fraction of the whole. Were natural laws efficiently observed, the average amount of life and health enjoyed by the Bengal peasant, would, I apprehend, far exceed that of the penned-up artizans of English cities.

Number.	Classes of Disease.	Jail Hospital. Admissions	Jail Hospital. Deaths.	Military Hospital. Admissions	Military Hospital. Deaths.	Dispensary. Admissions	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	19	1	9	...	...	...	19	20
2	Dropsy, Cancer, &c.	...	...	...	...	...	...	1	1
3	Diseases of Brain	1	...	...	...	...	...	1	1
4	„ Respiration	...	1	...	1	...	...	5	7
5	„ Heart, &c.	1	1	...	...	...	...	...	1
6	„ Digestion	11	3	3	...	...	...	5	8
7	Dis. of Genito-Urinary System	...	...	2	...	1	...	...	...
8	Childbirth, Diseases of Uterus	...	...	...	...	...	...	10	10
9	Diseases of Children	...	...	...	...	...	...	2	2
10	„ Spleen	...	...	2	...	...	...	1	1
11	„ Skin, Cellular Tissue	9	...	5	...	1	...	...	...
12	Rheumatism	3	...	1	...	...	...	1	1
13	Diseases of Eye	1	...	...	...	1	...	...	...
14	Snake-bite	...	...	...	...	...	...	1	1
15	Violence	1	...	...	...	1	...	...	...
16	Cholera Spasmodica	...	...	...	...	...	...	1	1
	Total	46	6	22	1	4	...	47	54
1	Daily Average Number of Sick	25·3		9·36		9·5 in patients 32· out do.		...	...
2	Ratio of Sick to Strength	5·9	Per Cent.	4·13	Per Cent.	...		...	...
3	Ratio of Death to Strength	1·4		·446		...		...	...
4	„ „ Treated	13·04		4·54		...		...	...
5	„ „ Population of Town	...		...		...		·235 Pr Cent.	...

Meteorological Register kept at Chittagong, for April, 1848.

Days of Month.	At 10 A.M. Thermometer in East Verandah.	Inches of Rain during preceding 24 hours.	Aspect of Sky.	Direction of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.
1	79	...	..	...	78	...	S.W.
2	78	...	Cloudy	W. by S.	78	...	...
3	79	...	...	...	81	...	...
4	80	...	...	...	80	...	...
5	80	...	...	...	80	...	...
6	79	...	...	...	80	...	...
7	79	...	Cloudy	W. by S.	80	Cloudy	S.W.
8	78	1·1	Very Cloudy	S.W.	79	„	S.W.
9	73	1·45	„	S.	79	„	S.W.
10	75	...	„	S.W.	79	„	S.W.
11	80	·04	„	S.W.	80	„	S.W.
12	79	·05	„	S.W.	80	„	S.W.
13	79	...	Less Cloudy	S.W.	80	„	S.W.
14	80	·63	Cloudy	S.W.	81	„	S.W.
15	80	...	„	S.W.	80	...	...
16	80	·42	„	S.W.	80	...	...
17	80	·41	„	S.W.	80	...	...
18	80	...	Fair	S.W.	80	...	...
19	80	...	Cloudy	S.W.	82	Fair	S.W.
20	82	...	„	...	81	...	...
21	80	...	Fair	S.W.	82	Fair	...
22	80	...	...	...	82	...	...
23	80	...	...	...	82	...	...
24	80	...	...	...	82	...	...
25	80	...	...	...	82	...	...
26	80	...	Fair	S.W.	82	Fair	S.W.
27	80	...	Cloudy.	S.W.	82	„	S.W.
28	80	·07	„	S.W.	82	...	...
29	82	·06	„	S.W.	83	Cloudy	S.W.
30	82	...	„	S.W.	82	„	S.W.

Meteorological Abstract for April, 1848.

Mean Observations.	Thermometer in East Verandah.	Direction of Wind.	Total Inches of Rain.	
At 10 A.M.	79·46	1. S.W. 2. S.	5·32	Elevation of Pluviometer, 60 feet.
At 4 P.M.	80·76	1. S.W. 2. S.	...	

Several severe gales occurred during the month, which were attended by an unusually small amount of electric disturbance.

Number.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Deaths.	Military Hospital. Admissions.	Military Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	7	...	33	...	...	...	21	21
2	Dropsy, Cancer, &c.	1	...	...	...	...	...	1	1
3	Diseases of Brain	...	...	...	...	...	...	4	4
4	„ Respiration	...	...	1	...	...	...	2	2
5	„ Digestion	9	...	3	...	...	...	13	13
6	„ Spleen	...	...	6	...	...	...	2	2
7	„ Skin, Cellular Tissue	5	...	1	...	1	...	...	...
8	Rheumatism	...	...	1	...	1	...	...	...
9	Diseases of Eye	1	...	...	...	2	...	...	...
10	Snake-bite	...	...	...	...	...	...	...	...
11	Wounds	2	...	...	...	1	...	...	...
12	Cholera Spasmodica	...	...	...	...	...	...	1	1
	Total	25	...	45	...	5	...	44	44
1	Daily Average Number of Sick	21·32		14·32		6·8 in-patient, 26·6 out do.		...	...
2	Ratio of Sick to Strenth	5·33 Per Cent.		6·39 Per Cent.		...		...	...
3	Ratio of Death to Strength	...		...		...		...	...
4	„ „ Treated	...		...		...		...	...
5	„ „ Population of							·22 per	

Meteorological Register kept at Chittagong, for May, 1848.

Days of Month.	At 10 A.M. Thermometer.	Inches of Rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	82	...	Cloudy	S.W.	Lt. Breeze	82	Cloudy	S.W.	Breeze
2	83	...	„	S.W.	„	82	...	S.S.E.	Lt. Breeze
3	77	·14	„	S.E.	„	79	...	E.	„
4	78	...	Fair	S.	Very do.	81	...	S.	Calm
5	80	...	„	S.W.	...	82	Fair	S.	„
6	80	...	„	S.W.	...	82	„	S.	...
7	82	...	„	S.W.	...	82	„	S.W.	...
8	80	...	„	S.W.	Light	82	„	S.W.	...
9	82	...	Cloudy	S.W.	...	84	„	S.W.	...
10	80	...	„	S.W.	...	82	„	S.W.	...
11	79	...	„	S.W.	Strong	81	Cloudy	S.W.	...
12	75	·78	Very do.	S.	„	81	„	S.W.	...
13	80	·07	„	S.W.	...	81	„	S.W.	...
14	80	...	„	S.W.	Light	81	„	S.W.	...
15	81	...	...	S.W.	Strong	84	Fair	S.W.	...
16	...	...	...	...	...	...	...	...	...
17	80	...	Very do.	S.	Strong	82	Fair	S.W.	...
18	80	·99	„	S.	„	82	...	S.W.	...
19	80	·30	Fair	S.	Light	81	Fair	S.W.	...
20	78	1·95	Cloudy	S.	„	80	„	...	...
21	74	...	„	S.E.	Strong	76	„	S.W.	...
22	78	4·83	„	S.E.	„	72	...	S.E.	...
23	78	2·3	„	S.W.	Light	79	...	S.W.	...
24	74	·18	„	E.	„	78	...	...	...
25	78	·37	„	S.W.	„	78	Fair	S.W.	...
26	78	·56	„	S.W.	„	77	...	S.	...
27	79	...	„	S.W.	„	80	...	S.W.	...
28	79	·65	„	S.W.	...	80	...	S.W.	...
29	80	...	„	S.W.	...	80	...	S.W.	...
30	78	...	„	S.W.	...	80	...	S.W.	...
31	81	·33	„	S.	...	80	...	S.W.	...

Abstract for May, 1848.

Mean Observations.	Thermometer.	Total Inches of Rain.	Direction of Wind.
At 10 A.M.	79·13	13·45	1. S.W. 2. S.
At 4 P.M.	80·43	...	1. S.E. 2. E.

Number.	Classes of Disease.	Hospital. Admissions.	Hospital. Deaths.	Hospital. Admissions.	Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	8	1	23	...	...	...	22	23
2	Dropsy, Cancer, &c.	...	...	...	...	...	...	1	1
3	Diseases of Brain	...	...	3	...	...	...	1	1
4	„ Respiration	...	...	...	...	...	...	1	1
5	„ Digestion	3	1	2	...	1	1	12	14
6	Childbirth, Diseases of Uterus	...	...	...	...	...	...	2	2
7	Diseases of Spleen	...	...	2	...	...	...	2	2
8	„ Skin, Cellular Tissue	7	...	...	...	...	...	...	...
9	Rheumatism	1	...	...	...	...	...	...	...
10	Diseases of Eye	...	...	...	...	1	...	...	...
11	Wounds	2	...	...	...	...	...	...	...
12	Violence	...	...	...	...	1	...	...	...
13	Cholera Spasmodica	...	...	...	...	...	...	2	2
	Total	21	2	30	...	3	1	43	46
1	Daily Average Number of Sick	17·2		18·3		6·7 in-patient 20·6 out do.		...	...
2	Ratio of Sick to Strength	4·39 per Cent.		8·16 per Cent.		...		...	...
3	Ratio of Death to Strength	·51 per Cent.		... per Cent.		...		...	...
4	„ „ Treated	9·95 per Cent.		... per Cent.		...		...	...
5	„ „ Population of Town	...		...		...		·2115	...

Days of Month.	At 10 A.M. Thermometer in East Verandah.	At 10 A.M. Inches of Rain during preceding 24 hrs.	At 10 A.M. Aspect of Sky.	At 10 A.M. Direction of Wind.	At 10 A.M. Force of Wind.	At 4 P.M. Thermometer in East Verandah.	At 4 P.M. Aspect of Sky.	At 4 P.M. Direction of Wind.	At 4 P.M. Force of Wind.
1	78	...	Cloudy	S.W.	Light	79	Cumulus	S.W.	Light
2	78	...	„	S.W.	„	81	„	...	„
3	78	...	„	S.W.	„	80	„	S.W.	„
4	78	...	„	S.W.	„	80	„	S.W.	„
5	78	...	„	S.W.	„	78	Cirrhi	S.S.E.	„
6	75	..	„	S.	„	78	...	S.	„
7	78	2	Cirrhi	S.	Light	77	Cirrhi	S.	...
8	75	·55	Nimbus	S.	„	75	„	S.	Strong
9	75	2·58	„	S.	...	75	Nimbus	S.	„
10	76	·48	Cumulus	S.	Light	77	Cirrhi	S.	Light
11	...	...	...	...	...	...	...	...	...
12	78	1·30	Cumulus	S.	Light	79	Cumulus	S.S.E.	Light
13	78	...	„	S.W.	„	79	„	S.	„
14	79	...	„	S.	„	79	„	S.	„
15	80	...	„	S.S.E.	„	80	„	S.	„
16	80	...	„	S.W.	„	80	„	S.W.	„
17	80	·06	„	S.E.	„	80	„	S.W.	„
18	80	·17	„	S.S.E.	„	80	„	S.E.	„
19	79	·22	Nimbus	S.S.E.	Strong	79	Nimbus	S.E.	„
20	76	2·33	„	S.	„	76	„	S.	„
21	77	2·65	„	S. by S.	„	77	„	S.	„
22	76	2·70	„	S.W.	...	76	„	S.	„
23	78	3·30	Cumulus	S. by E.	...	79	„	S.	Light
24	80	·42	„	S.W.	...	80	Cumulus	S.W.	„
25	80	·15	„	S.W.	...	80	„	S.W.	...
26	80	·92	Nimbus	S.W.	...	80	Nimbus	S.W.	...
27	80	·56	„	S.W.	...	74	„	E.	...
28	80	·80	Cumulus	S.W.	...	80	Cumulus	S.E.	...
29	80	...	...	...	...	80	...	...	...
30	78	...	Cumulus	S.W.	...	80	Cumulus	S.	...

Abstract for June, 1848.

Mean Observations.	Thermometer.	Total Inches of Rain.	Direction of Wind.	Prevailing Clouds.
At 10 A.M.	78·2	21·19	1. S.W. 2. S.	1. Cumul. 2. Cirrhi. 3. Nimbus.
At 4 A.M.	78·5	...	2. S.W. 2. S.	

Some thunder and lightning during month. Towards its close Fever began to prevail, chiefly of an intermittent type.

July, 1848.

Number.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Deaths.	Military Hospital. Admissions.	Military Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	14	...	20	...	...	...	24	24
2	Dropsy, Cancer, &c.	...	...	...	...	...	...	1	1
3	Diseases of Brain	...	...	...	...	...	...	3	3
4	„ Respiration	...	...	2	...	...	...	2	2
5	„ Digestion	4	2	1	...	1	...	6	8
6	„ Spleen	...	...	5	...	...	...	3	3
7	Childbirth, Diseases of Uterus	...	...	...	...	...	...	1	1
8	Diseases of Children	...	...	...	...	...	...	1	1
9	„ Skin, Cellular Tissue	11	...	2	...	...	1	...	1
10	Syphilis	...	...	1	...	1	...	2	2
11	Rheumatism	2	...	...	...	2	...	...	...
12	Diseases of Eye	1	...	...	...	...	...	...	...
13	Wounds	3	...	...	...	5	...	...	...
14	Violence	...	...	...	...	2	...	...	...
	Total	35	2	31	...	11	1	43	46
1	Daily Average Number of Sick	9·93		23·12		5·06 in-patient 32· out do.		...	...
2	Ratio of Sick to Strength	5·69	per Cent.	10·36	per Cent.	...		...	...
3	Ratio of Death to Strength	·51		...		...		...	...
4	„ „ Treated	5·71		...		9·9		...	...
5	„ „ Population of Town	...		...		...	·2115 per cent	...	

Meteorological Register kept at Chittagong, for July, 1848.

Days of Month.	At 10 A.M. Thermometer.	Inches of Rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	78	2·30	Cumulus	S.	Light	78	Nimbus	S.	Light
2	73	·20	Nimbus	S.S.E.	„	78	„	S.E.	„
3	81	·22	Cumulus	S.	...	83	Cumulus	S.W.	...
4	83	...	„	S. by W.	...	81	„	S.W.	...
5	83	...	„	S.	...	82	„	S.	...
6	82	...	„	S. by W.	...	83	„	S.	...
7	79	...	Nimbus	S.	...	80	...	S.W.	...
8	80	...	Cumulus	S. by W.	...	79	...	S.	...
9	80	·13	„	S.	...	79	...	S.	...
10	82	·10	„	S. by E.	...	80	...	S. by W.	...
11	83	...	„	S. by W.	...	81	...	S.W.	...
12	83	...	„	...	...	82	...	S.W.	...
13	84	...	„	S.W.	...	82	...	S.	...
14	83	...	„	S.E.	...	83	...	S.W.	...
15	84	·15	„	S.E.	...	83	...	S.E.	...
16	82	...	„	S. by E.	...	83	...	S.E.	...
17	82	·24	„	S. by E.	...	83	...	S.E.	...
18	84	...	„	S.E.	...	83	...	...	...
19	83	...	„	S. by E.	...	82	...	...	...
20	84	...	Nimbus	S. by E.	...	82	...	S.	...
21	82	·20	Cumulus	S.E.	...	82	...	S.E.	...
22	84	...	...	S. by E.	...	82	...	S.E.	...
23	84	...	Cumulus	S.E.	...	82	...	S.E.	...
24	82	·05	„	S. by E.	...	82	...	S.E.	...
25	84	...	„	S.W.	...	83	...	S.E.	...
26	83	...	Nimbus	S.W.	...	82	...	S. by W.	...
27	82	...	„	S. by E.	...	82	...	S.W.	...
28	79	0·33	„	...	...	82	...	S.E.	...
29	81	3·58	„	...	...	82	...	...	...
30	81	1·14	„	...	...	82	...	...	...
31	81	0·10	„	...	...	...	...	...	...

Abstract for July, 1848.

Mean Observations.	Thermometer.	Total Inches of Rain.	Direction of Wind.	Prevailing Clouds.
At 10 A.M.	79·21	8·71	1. S.W. 2. S. 3. S.W.	Cumulus.
At 4 P.M.	79·9	...	1. S.W. 2. S.E.	Nimbus.

This month has been distinguished by the large amount of Fever prevailing in the town and neighbourhood. If rumour can be believed, the type must have been unusually severe, as several cases are reported to have died in a few hours. The Fever which existed in the town was of two kinds; the one a regular intermittent; the other commencing as Influenza, and then becoming periodic. It will be observed, however, that the convicts in jail have suffered very slightly, whether compared with the inhabitants of town or the sepoys in military hospital.

Number.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Deaths.	Military Hospital. Admissions.	Military Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	4	...	30	...	1	...	21	21
2	Dropsy, Cancer, &c.	...	...	...	...	...	...	3	3
3	Diseases of Brain	1	...	...	...	...	...	4	4
4	„ Respiration	1	...	...	...	...	...	...	...
5	„ Digestion	6	1	1	...	...	1	9	11
6	„ Spleen	1	...	2	...	...	...	...	...
7	„ Children	...	...	...	...	...	...	1	1
8	„ Skin, Cellular Tissue	4	...	2	...	1	...	2	2
9	Syphilis	...	...	1	...	...	1	...	1
10	Rheumatism	1	...	1	...	1	...	...	...
11	Diseases of Old Age	...	...	...	...	...	...	1	1
12	Wounds	5	...	1	...	1	...	...	...
13	Violence	...	...	...	...	1	...	...	...
14	Cholera Spasmodica	1	1	...	...	...	...	1	2
	Total	24	2	38	...	5	2	42	46
1	Daily Average of Sick	23·12		31·7		4·4 in-patient 24. out do.		...	...
2	Ratio of Sick to Strength	5·80	Per Cent.	14·27	Per Cent.	...		...	...
3	Ratio of Death to Strength	·502	Per Cent.	...	Per Cent.	...		...	...
4	„ „ Treated	8·33	Per Cent.	...	Per Cent.	40		...	...
5	„ „ Population of Town	...		...		...		·21	...

Meteorological Register kept at Chittagong, for August, 1848.

Days of Month.	At 10 A.M. Barometer.	Thermometer.	Inches of Rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	...	...	0·15	Nimbus	S.E.	Light	80	...	...	...
2	...	...	3·31	Cumulus	S.E.	...	80	...	...	...
3	...	78	1·75	Nimbus	S.E.	...	80	Nimbus	...	...
4	...	75	2·09	Cumulus	S.W.	...	80	...	...	...
5	29·69	82	·25	„	...	Light	80	...	...	...
6	29·59	79	...	„	S.W.	„	78	...	...	...
7	...	78	·15	„	S.W.	„	79	Cumulus	S.W.	Light
8	29·70	79	...	„	S.W.	„	79	„	S.W.	„
9	29·75	80	...	„	S.W.	...	79	Nimbus	S.W.	„
10	29·30	80	2·90	„	S.W.	...	80	Cumulus	S.W.	„
11	29·69	78	1·50	„	S.W.	...	80	Nimbus	S.W.	„
12	29·74	80	·60	„	S.W.	...	80	„	S.W.	„
13	29·68	79	1·45	Nimbus	S.W.	...	82	„	S.W.	„
14	29·68	79	·25	Cumulus	S.W.	...	82	„	S.W.	„
15	29·68	80	...	„	S.E.	...	82	Cumulus	S.E.	...
16	29·72	79	·07	„	S.	...	82	„	S.E.	...
17	29·68	79	·45	„	S.E.	...	82	„	S.W.	...
18	29·65	80	·65	„	S.E.	...	82	Nimbus	S.E.	...
19	29·74	80	...	„	S.E.	...	82	Cumulus	S.E.	...
20	29·76	80	...	„	S.E.	...	82	„	S.E.	...
21	29·78	82	·30	„	S.W.	...	82	„	S.W.	...
22	...	80	·35	„	S.W.	...	82	„	S.W.	...
23	29·81	80	1·15	Nimbus	S.E.	...	82	„	S.E.	...
24	29·80	80	3·59	...	S.E.	...	79	Nimbus	S.E.	...
25	29·70	79	1·64	Nimbus	S.E.	...	78	„	S.E.	...
26	29·70	80	·15	Cumulus	S.byE.	...	79	Cumulus	S.byE.	...
27	29·73	83	...	„	S.E.	...	84	„	S.E.	...
28	29·80	82	...	„	S.	...	84	„	S.	...
29	29·80	83	...	„	S.byE.	...	84	„	S.E.	...
30	29·75	82	...	„	S.E.	...	84	„	S.E.	...
31	29·75	82	...	„	S.E.	...	84	„	S.E.	...

Abstract for August, 1848.

Mean Observations.	Barometer.	Thermometer.	Prevailing Wind.	Prevailing Clouds.	Rain in Inches.
At 10 A.M.	29·84	79·75	1. S.E. 2. S.W. 3. S.	Cumulus.	22·75
At 4 P.M.	...	81	1. S.E. 2. S.W. 3. S.	Nimbus.	...

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Number.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Deaths.	Military Hospital. Admissions.	Military Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	14	1	7	...	...	...	10	11
2	Dropsy, Cancer, &c.	...	...	...	...	3	...	1	1
3	Diseases of Brain, &c.	1	...	...	...	...	...	4	4
4	„ Respiration	1	...	...	...	...	...	4	4
5	„ Digestion	4	...	...	...	...	...	2	2
6	„ Spleen	...	...	2	...	...	...	2	2
7	Dis. of Genito-Urinary System	...	...	...	...	1	...	...	...
8	Childbirth, Diseases of Uterus	...	...	...	...	...	...	1	1
9	Rheumatism	2	...	...	...	...	...	...	...
10	Diseases of Skin, Cellular Tissue	6	...	4	...	1	...	...	...
11	Syphilis	...	...	1	...	...	...	...	...
12	Diseases of Eye	2	...	1	...	...	...	...	...
13	Wounds	5	...	...	...	...	...	...	...
14	Violence	...	...	...	...	1	...	...	...
15	Snake-bite	...	...	...	...	...	...	1	1
16	Cholera Spasmodica	...	...	...	...	...	...	1	1
	Total	35	1	15	...	6	...	26	27

1	Daily Average Number of Sick	22·83		28·13		5·46 in-patient 28· out do.		...	...
2	Ratio of Sick to Strength	5·75	Per Cent.	12·84	Per Cent.	...		...	...
3	Ratio of Death to Strength	·251		...		...		...	...
4	„ „ Treated	2·85		...		...		...	...
5	„ „ Population of Town							·12	

Meteorological Register kept at Chittagong, for September, 1848.

Days of Month.	At 10 A.M. Barometer.	Thermometer.	Inches of Rain during preceding 24 hours.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	29·65	82	...	Cumulus	S.	Light	84	Cumulus	S.	Light
3	29·80	82	...	„	S.	„	84	„	S.	„
2	29·85	82	·85	„	S. by E.	„	84	„	S. by E.	„
4	29·82	83	·06	„	...	...	84	„	S.E.	„
5	29·86	83	1·25	„	S.W.	...	84	„	S.W.	„
6	29·89	82	·10	„	S. by E.	...	84	„	S.E.	„
7	29·87	82	·45	„	S. by E.	...	84	„	S. by E.	...
8	29·86	82	...	„	S.W.	...	84	„	S.E.	...
9	29·85	84	...	„	S. by E.	...	84	„	S.	...
10	29·90	82	·25	Nimbus	S.	...	84	„	S.	...
11	29·83	80	1·07	„	S. by E.	...	80	Nimbus	S.	...
12	29·72	78	1·07	Cumulus	S.	...	80	Cumulus	S.W.	...
13	29·73	80	·55	„	S.	...	82	„	S.	...
14	29·81	80	...	„	S. b. W.	...	82	„	S.	...
15	29·84	80	·85	„	S.	...	82	„	S.	...
16	29·89	80	...	„	S.	...	82	„	W.N.W.	...
17	29·90	82	...	„	S.	...	82	„	S.W.	...
18	29·84	86	...	„	...	...	87	„	...	...
19	29·80	85	...	„	S.W.	...	85	„	...	...
20	29·83	80	...	„	S.E.	...	78	Nimbus	N.W.	...
21	29·89	82	4·17	„	...	...	84	Cumulus	N.W.	...
22	29·90	85	...	„	S.W.	...	86	...	...	...
23	29·82	86	...	„	N.W.	...	86	...	...	...
24	29·80	84	...	...	N.W.	...	86	Cumulus	...	...
25	29·80	78	...	...	...	...	84	„	...	...
26	29·80	78	·05	...	...	...	84	...	N.W.	...
27	29·84	84	...	Cumulus	...	...	84	„	N.W.	...
28	29·86	85	...	„	N.W.	...	86	„	...	...
29	29·88	79	·05	Nimbus	...	...	86	„	...	...
30	29·90	83	2·15	„	...	...	77	Nimbus	...	...

Abstract for September, 1848.

Mean Observations.	Barometer.	Thermometer.	Total Inches of Rain.	Prevailing Wind.	Prevailing Clouds.
At 10 A.M.	29·60	81·96	12·92	1. S.W. 2. S.E. 3. S.	Cumulus
At 4 P.M.	...	82·7	...	1. S.E. 2. S.W. 3. S. 4. N.W.	...

This month has, as usual, been marked by great stagnation in the atmosphere. During its latter portion, the wind has veered round towards the North. Rain has ...

Number.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Deaths.	Military Hospital. Admissions.	Military Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	5	...	21	...	...	...	13	13
2	Diseases of Brain	1	...	...	...	...	...	5	5
3	„ Respiration	...	...	1	...	...	...	1	1
4	„ Digestion	13	...	6	...	...	...	16	16
5	„ Spleen	...	...	7	...	...	...	3	3
6	Rheumatism	2	...	1	...	...	...	...	...
7	Diseases of Genito-Urinary System	...	...	1	...	...	...	...	...
8	Diseases of Skin, Cellular Tissue	1	...	2	...	2	...	...	...
9	Syphilis	...	...	1	...	...	...	...	...
10	Diseases of Eye	...	...	...	...	1	...	...	...
11	Wounds	4	...	2	...	2	...	...	...
12	Snake-bite	...	...	...	...	...	...	1	1
	Total	26	...	42	...	5	...	39	39
1	Daily Average Number of Sick	21·67		22·29		4·48 in-patient 28· out do.		...	...
2	Ratio of Sick to Strength	5·07 per Cent.		10·04 per Cent.		...		...	...
3	Ratio of Death to Strength	...		...		...		...	...
4	„ „ Treated	...		...		...		...	...
5	„ „ Population of Town	...		...		...		·195	...

Meteorological Register kept at Chittagong, for October, 1848.

Days of Month.	At 10 A.M. Barometer.	Thermometer.	Inches of Rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	29·82	81	·15	Cumulus	S.E.	Light	84	Cumulus	S.E.	...
2	29·84	83	...	„	S.E.	„	83	„	S.E.	...
3	29·92	86	·45	„	S.E.	„	86	„	W.	...
4	29·90	83	·97	„	S.E.	„	80	Nimbus	...	...
5	29·92	85	·11	„	...	„	86	„	N.W.	...
6	29·93	85	...	„	...	...	86	...	N.W.	...
7	29·93	85	...	„	N.W.	Light	86	...	N.W.	...
8	29·93	86	...	„	S.W.	...	87	...	...	...
9	29·93	83	...	„	S.W.	...	86	Cumulus	...	...
10	29·90	82	...	„	...	...	81	„	...	...
11	29·84	83	...	„	...	Still	85	„	...	...
12	29·83	85	...	„	...	...	85	„	...	...
13	29·89	81	...	„	S.E.	...	85	Nimbus	Breeze	...
14	29·93	82	...	„	S.E.	...	80	...	...	...
15	29·93	82	...	„	S.E.	Strong	84	Nimbus	Slur	...
16	29·93	82	...	Nimbus	S.	Light	79	Cumulus	W.	...
17	29·94	82	1·20	...	S.	„	82	„	...	...
18	29·94	76	·55	Nimbus	S.	...	80	„	...	...
19	...	81	...	Cumulus	...	...	83	„	W.	...
20	...	82	...	„	W.	...	83	„	...	...
21	...	82	...	„	W.	...	82	...	...	...
22	...	82	...	„	N.W.	...	84	...	...	...
23	...	84	...	„	...	Light	84	...	W.	...
24	...	84	...	...	W.	...	84	Cumulus	...	...
25	...	84	...	...	W.	...	84	...	...	...
26	30·5	84	...	Cumulus	W.	...	84	Cumulus	...	...
27	...	84	...	„	W.	...	84	...	...	...
28	...	84	...	„	W.	...	84	...	...	...
29	...	82	...	„	W.	...	84	Cumulus	...	...
30	...	82	...	„	W.	...	84	„	N.W.	...
31	...	82	...	„	N.W.	...	84	„	N.W.	...

Abstract for October, 1848.

Mean Observations.	Barometer.	Thermometer.	Total Inches of Rain.	Prevailing Wind.	Prevailing Clouds.
At 10 A.M.	29·934	82·81	3·43	1. W. 2. S.E. 3. S.	Cumulus
At 4 P.M.	...	83·66	...	1. W. 2. N.W.	„

3rd. Heavy clouds collecting during the evening in South-East, and a few vivid flashes of lightning were seen. About 10 P.M. the whole sky was covered with inky clouds; a squall of almost hurricane force came on, lasting 20 minutes, blowing due East.—12th. A mild type of Cholera appeared yesterday in town; ten men were attacked near the jail, but all recovered. 24th. Cholera appears in more severe form, chiefly in northern mohullas.—13th and 14th. Unusually high tides, reaching 2½ feet higher than had ever been known in Chittagong. The whole of the surrounding country was inundated.

NOVEMBER, 1848.

Number.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Deaths.	Military Hospital. Admissions.	Military Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	8	...	12	...	...	...	19	19
2	Dropsy, Cancer, &c.	2	...	...	...	...	...	3	3
3	Diseases of Brain	1	...	...	...	1	...	2	2
4	„ Respiration	...	...	...	...	...	...	3	3
5	„ Digestion	10	1	...	...	...	...	1	2
6	„ Spleen	...	...	...	...	...	...	1	1
7	Rheumatism	2	...	...	...	1	...	...	...
8	Diseases of Skin, Cellular Tissue	7	...	2	...	1	...	...	...
9	Wounds	4	...	1	...	...	...	...	...
10	Diseases of the Eye	...	...	...	...	1	...	...	...
11	Cholera Spasmodica	...	...	...	...	...	...	28	28
	Total	34	1	15	...	4	...	57	58
	Daily Average Number of Sick	25·83		4·3		3·4 in-patient 26· out do.		...	...
	Ratio of Sick to Strength	5·83	per Cent.	1·8	per Cent.	...		...	...
	Ratio of Death to Strength	·225	per Cent.	...	per Cent.	...		...	...
	„ „ Treated	2·94	per Cent.	...	per Cent.	...		...	...
	„ „ Population of Town	...		...		...		·285	...

Meteorological Register kept at Chittagong, for November, 1848.

Days of Month.	At 10 A.M. Barometer.	Thermometer.	Inches of Rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...
3	...	82	...	...	...	...	82	...	...	...
4	...	82	...	Clear	N.W.	Light	82	...	...	...
5	...	...	...	...	...	...	...	...	...	...
6	30	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...
8	30	...	...	...	...	...	...	...	...	...
9	29·96	...	...	...	...	...	...	...	...	...
10	29·93	...	...	...	...	...	...	Clear	...	...
11	...	82	...	Clear	N.W.	Light	80	„	...	Light
12	...	82	...	„	N.W.	„	83	„	...	„
13	29·97	80	...	...	N.W.	„	80	...	N.	„ „
14	...	74	·13	Cloudy	N.W.	...	75	...	N.	...
15	...	79	...	...	...	...	82	...	N.	...
16	29·99	76	·55	Cloudy	W.	...	78	...	...	...
17	29·99	72	2·90	N.	S.E.	...	75	...	W.	...
18	30·8	80	...	W.	W.	...	77	...	W.	...
19	30·7	79	...	...	W. by N.	...	77	...	...	...
20	30·10	79	...	...	W. by N.	...	77	...	...	...
21	30·10	77	...	Clear	W. by N.	...	...	...	W.	...
22	30·10	...	...	...	...	...	75	...	...	...
23	30·10	77	...	...	N. by N.	...	77	...	W.	...
24	30·10	76	...	...	...	...	77	...	W.W.	...
25	30·10	76	...	...	...	...	79	...	W. by N.	...
26	30·5	76	·03	...	W. by N.	...	...	...	...	...
27	30·10	...	...	...	...	...	79	...	...	...
28	30·17	76	...	...	W. by N.	...	79	...	W. by N.	...
29	30·20	77	...	Clear	W. by N.	...	78	...	W. by N.	...
30	30·20	76	...	...	...	...	78	...	W. by N.	...

Abstract for the Month of November.

Mean Observation.	Barometer.	Thermometer.	Prevailing Wind.	Prevailing Clouds.	Total Inches of Rain.
At 10 A.M.	30·065	77·9	1. W. by N. 2. N.W. 3. W. 4. S.E.	...	...
At 4 P.M.	...	78·4	1. W. by N. 2. N.W.	...	3·6

10th. Much Cholera in neighbourhood of Healishur Feringee Bazaar. The high Spring-tides of last month flooded the low rice land, and much of the grain is rotting.

Number.	Classes of Disease.	Jail Hospital		Military Hospital.		Dispensary.		Town—Deaths.	Grand Total of Deaths.
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.		
1	Zymotic Disease	6	2	...	...	...	...	22	24
2	Dropsy, Cancer, &c.	...	1	...	...	...	...	...	1
3	Diseases of Respiration	...	...	...	...	...	...	2	2
4	„ Digestion	13	2	3	1	...	...	5	8
5	„ Children	...	...	...	...	...	...	3	3
6	Childbirth, Diseases of Uterus	...	...	...	...	...	...	2	2
7	Rheumatism	1	...	...	...	1	...	...	...
8	Diseases of Skin, Cellular Tissue	3	...	2	...	2	...	...	...
9	„ Eye	1	...	...	...	1	...	...	...
10	Wounds	2	...	...	...	...	...	...	...
11	Cholera Spasmodica	1	...	...	...	...	...	29	29
	Total	27	5	5	1	4	...	63	69
	Daily Average Number of Sick	24·6		5·93		4·2 in-patient 25· out do.		...	...
	Ratio of Sick to Strength (Per Cent.)	5·67		2·54		...		...	...
	„ Deaths to Strength (Per Cent.)	1·15		...		...		...	...
	„ „ Treated (Per Cent.)	18·51		...		...		...	...
	„ „ Population of Town	...		...		...		3·15	...

Days of Month.	Thermometer at Sunrise.	At 10 A.M. Barometer.	Thermometer.	Inches of Rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	...	30·16	76	...	Clear	N.W.	Light	76	...	N.W.	Light
2	...	30·10	76	...	„	N.W.	„	73	...	N.W.	„
3	63	30·07	72	...	...	...	„	73	...	...	...
4	61	30·02	72	...	...	N.W.	...	72	...	N.W.	...
5	61	30·05	74	...	...	N.W.	...	74	...	N.W.	...
6	61	30·01	74	...	...	N.W.	...	74	...	N.W.	...
7	62	30·01	75	...	...	N.W.	...	74	...	N.W.	...
8	60	30·07	74	...	...	N.W.	...	74	...	...	...
9	60	...	72	...	...	N.W.	...	74	...	...	...
10	60	30·07	72	...	...	N.W.	...	73	...	N.W.	...
11	60	30·10	74	...	...	N.W.	...	73	...	N.W.	...
12	60	30·05	72	...	...	N.W.	...	73	...	N.W.	...
13	59	30·06	72	...	...	N.W.	...	72	...	N.W.	...
14	58	30·01	72	...	...	N.W.	...	73	...	N.W.	...
15	59	30·00	72	...	...	N.W.	...	73	...	N.W.	...
16	59	30·03	72	...	...	N.W.	...	73	...	N.W.	...
17	60	30·04	72	...	...	N.W.	...	73	...	N.W.	...
18	61	30·02	73	·25	...	N.W.	...	73	...	N.W.	...
19	59	29·97	74	...	...	N.W.	...	73	...	N.W.	...
20	60	29·94	75	3·50	Clear	N.W.	...	64	...	N.W.	...
21	60	30·00	68	...	„	...	...	71	...	N.W.	...
22	60	30·07	70	·55	„	N.W.	...	71	...	N.W.	...
23	59	30·13	71	...	„	N.W.	...	71	...	N.W.	...
24	56	30·16	70	...	„	N.W.	...	69	...	N.W.	...
25	56	30·12	70	...	„	N.W.	...	69	...	N.W.	...
26	59	30·09	70	...	„	N.W.	...	70	...	N.W.	...
27	59	30·06	70	...	„	N.W.	...	70	...	N.W.	...
28	59	30·10	70	...	„	N.W.	...	70	...	N.W.	...
29	57	30·10	70	...	...	N.W.	...	70	...	...	...
30	58	30·08	70	...	...	N.W.	...	70	...	...	...
31	58	30·06	71	...	...	N.W.	...	...	...	...	...

Abstract for the Month of December, 1848.

Mean Observation.	Barometer.	Thermometer.	Total Inches of Rain.	Prevailing Wind.	Prevailing Clouds.
At Sunrise	...	59·44	...	...	...
At 10 A.M.	30·05	69·51	4·30	N.W.	...
At 4 P.M.	...	69·61	...	N.W.	...

13th. A man in jail was attacked with Cholera Spasmodica, and died.—18th. Rain, preceded by severe gusts of wind, fell last night.—20th. Heavy rain last night and this morning, accompanied by thunder and several flashes of lightning.

JANUARY, 1849.

Number.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Deaths.	Military Hospital. Admissions.	Military Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	11	1	2	...	...	...	21	22
2	Dropsy, Cancer, &c.	1	...	...	...	...	...	...	...
3	Diseases of Brain	1	...	1	...	...	...	...	...
4	„ Respiration	...	...	...	...	...	...	2	2
5	„ Digestion	9	2	1	...	...	...	...	2
6	„ Spleen	...	...	...	...	...	...	2	2
7	„ Children	...	...	...	...	...	...	3	3
8	Rheumatism	1	...	2	...	...	...	...	...
9	Diseases of Skin, Cellular Tissue	1	...	2	...	1	...	...	...
10	Syphilis	...	...	...	...	1	...	...	...
11	Diseases of Eye	...	...	...	...	2	...	...	...
12	Wounds	...	...	2	...	2	...	...	...
13	Drowning	...	...	...	...	...	...	1	1
14	Violence	...	...	...	...	2	...	...	...
15	Anomalous	...	...	...	...	...	...	1	1
16	Cholera Spasmodica	2	1	...	...	...	...	14	15
	Total	26	4	10	...	8	...	44	48

1	Daily Average Number of Sick	16·38		3·58		6·9 in-patient 23· out do.		...	...
2	Ratio of Sick to Strength	3·87	per Cent.	1·53	per Cent.	...		...	...
3	Ratio of Death to Strength	·945		...		...		...	...
4	„ „ Treated	15·38		...		...		...	...
5	„ „ Population of Town	...		...		...		·22	...

Meteorological Register kept at Chittagong, for January, 1849.

Days of Month.	Thermometer at Sunrise.	At 10 A.M. Barometer.	Thermometer in East Verandah.	In. rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	60	30·07	70	...	Clear	N.W.	Light	71	Clear	S.W.	...
2	65	30·11	70	...	„	S.W.	...	71	„	N.W.	...
3	65	30·11	70	...	„	N.W.	...	71	„	N.W.	...
4	56	30·11	68	...	„	N.W.	...	70	...	N.W.	...
5	57	30·10	70	...	„	N.W.	...	70	...	N.W.	...
6	57	30·05	71	...	„	N.W.	...	73	...	N.W.	...
7	60	30·10	71	...	Cloud	N.W.	Storm	71	...	N.W.	...
8	58	30·07	70	...	Cumu.	N.W.	Light	69	...	N.W.	...
9	54	30·09	69	...	„	N.W.	„	69	...	N.W.	...
10	59	30·07	70	...	...	N.W.	...	70	...	N.W.	...
11	59	30·15	71	...	...	N.W.	...	70	...	N.W.	...
12	56	30·10	66	...	...	N.W.	...	67	...	N.W.	...
13	58	30·06	68	...	...	N.W.	...	68	...	N.W.	...
14	58	30·06	68	...	...	N.W.	...	68	...	N.W.	...
15	58	30·08	68	...	...	N.W.	...	68	...	N.W.	...
16	52	30·65	68	...	...	N.W.	...	68	...	N.W.	...
17	57	30·01	70	...	...	S.E.	...	70	...	S.E.	...
18	60	29·97	68	·80	...	S.E.	Storm	59	...	S.	...
19	56	30·04	65	·35	...	N.W.	Light	64	...	N.W.	...
20	56	30·03	68	...	...	N.W.	...	68	...	N.W.	...
21	56	30·09	68	...	...	N.W.	...	68	...	N.W.	...
22	54	30·07	68	...	...	N.W.	...	68	...	N.W.	...
23	52	30·04	68	...	...	N.W.	...	68	...	N.W.	...
24	54	30·00	68	...	...	N.W.	...	68	...	N.W.	...
25	54	30·04	68	...	...	N.W.	...	70	...	N.W.	...
26	56	30·05	68	...	...	N.W.	...	70	...	N.W.	...
27	56	30·07	68	...	...	N.W.	...	69	...	N.W.	...
28	54	30·07	68	...	...	N.W.	...	69	...	N.W.	...
29	54	30·12	67	...	...	N.W.	...	70	...	N.W.	...
30	54	30·10	69	...	...	N.W.	...	70	...	N.W.	...
31	54	30·09	70	...	...	N.W.	...	70	...	N.W.	...

Abstract for January, 1849.

Mean Observations.	Barometer.	Thermometer.	Total Inches of Rain.	Prevailing Wind.	Prevailing Clouds.
At Sunrise	...	56·41	...	.....	...
At 10 A.M.	30·07	68·41	1·15	1. N.W. 2. S.E.	...
At 4 P.M.	...	68·87	...	1. N.W. 2. S.E.	...

17th. Clouds began to collect in the morning, and increased towards evening, the wind simultaneously going round to South-East.—18th. 5 A.M., heavy rain, wind strong, increasing to stiff breeze by 10 A.M.; much rain; a case of Cholera in Jail Hospital.

Number.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Death.	Military Hospital. Admissions.	Military Hospital. Death.	Dispensary. Admissions.	Dispensary. Death.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	9	...	6	...	...	...	13	13
2	Diseases of Respiration	...	...	...	...	...	...	2	2
3	„ Digestion	9	3	3	...	...	...	1	4
4	„ Spleen	1	1	...	...	...	...	...	1
5	„ Children	...	...	...	...	...	...	2	2
6	„ Skin, Cellular Tissue	2	...	3	...	1	...	...	...
7	Syphilis	...	...	1	...	...	...	...	...
8	Rheumatism	1	1	1	...	...	...	...	1
9	Diseases of Eye	1	...	...	...	1	...	...	...
10	Wounds	1	...	3	...	...	...	...	...
11	Drowning	...	...	...	...	...	...	2	2
12	Poisoning	...	...	...	...	...	...	1	1
13	Violence	...	...	...	...	1	1	...	1
14	Cholera Spasmodica	...	...	...	...	...	...	13	13
	Total	24	5	17	...	3	1	34	40
1	Daily Average Number of Sick	16·35		6·22		2·24 in-patient 25· out do.		...	...
2	Ratio of Sick to Strength	3·56 (Per Cent.)		2·62 (Per Cent.)		...		...	...
3	Ratio of Death to Strength	1·09 (Per Cent.)		... (Per Cent.)		...		...	...
4	„ „ Treated	20· (Per Cent.)		... (Per Cent.)		...		...	...
5	„ „ Population of Town	...		...		...		·17	...

Meteorological Register kept at Chittagong, for February, 1849.

Days of Month.	Thermometer at Sunrise.	At 10 A.M. Barometer.	Thermometer.	Inches of Rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	54	30·11	70	...	...	N.W.	...	70	...	N.W.	...
2	54	30·09	70	...	...	N.W.	...	71	...	N.W.	...
3	56	30·07	71	...	...	N.W.	...	72	...	N.W.	...
4	60	30·10	71	...	...	...	...	73	...	N.W.	...
5	60	30·12	70	...	...	N.W.	...	74	...	N.W.	...
6	60	30·08	71	...	...	N.W.	...	74	...	N.W.	...
7	60	30·07	73	...	...	N.W.	...	74	...	N.W.	...
8	60	30·10	73	...	...	N.W.	...	72	...	N.W.	...
9	54	30·08	70	...	...	N.W.	...	71	...	N.W.	...
10	58	30·07	70	...	...	N.W.	...	72	...	N.W.	...
11	57	29·98	62	...	...	N.W.	Strong	65	...	N.W.	...
12	56	29·97	70	...	c.*	N.W.	0	70	c.	N.W.	0
13	58	30·02	70	...	c.	N.W	0	71	c.	N.W.	0
14	57	30·07	70	...	c.	S.E.	0	72	c.	S.E.	0
15	63	30·05	73	...	c.	S.E.	0	73	...	S.E.	...
16	60	30·07	72	...	...	...	...	74	...	...	...
17	60	...	72	...	c.	N.W.	1	74	...	N.W.	1
18	62	29·94	74	...	c	S.E.	0	72	...	S.	1
19	63	29·84	73	1·65	c. gg.	S.	9	72	c. gg.	S.E.	9
20	68	29·84	73	...	c gg.	S.byE.	9	74	c.	S.E.	9
21	68	29·84	70	...	gg.	S.E.	9	73	gg.	S.E.	9
22	68	29·84	70	4·00	c.	S.	1	75	c.	...	...
23	68	29·94	70	...	c.	S.	1	76	c.	S.	1
24	66	29·94	72	...	c.	S.E.	1	76	c.	S.	1
25	67	29·96	75	3·46	gg gg.	N.W.	8	73	gg.	S.E.	8
26	67	29·92	69	...	...	...	1	72	c.	...	1
27	67	30·01	73	...	c.	S.	1	74	c.	S.	1
28	62	30·05	71	...	c.	S.	...	74	c.	S.	1

Abstract for February, 1849.

Mean Observation.	Barometer.	Ther. in E. Verandah.	Total Inches of Rain.	Prevailing Wind.	Prevailing Clouds.
Sunrise	...	61·17	...	...	...
At 10 A.M.	30·004	73·62	5·51	1. N.W. 2. S.E. 3. S.	1. clo. 2. co.g.
At 4 P.M.	...	75·29	...	1. N.W. 2. S.E. 3. S.	1. co.

13th. A man in jail was attacked with Cholera Spasmodica, and died. 18th. Rain, preceded by severe gusts of wind, fell last night. 20th. Heavy rain last night and this morning, accompanied by thunder and several flashes of lightning.

* On this date I began to make use of the meteorological symbols recommended and employed by Captain Sir J. Clark Ross, in his Antarctic voyage.

Numbers.	Classes of Disease.	Jail Hospital. Admissions.	Jail Hospital. Deaths.	Military Hospital. Admissions.	Military Hospital. Deaths.	Dispensary. Admissions.	Dispensary. Deaths.	Town—Deaths.	Grand Total of Deaths.
1	Zymotic Disease	14	1	9	...	...	...	21	22
2	Dropsy, Cancer, &c.	1	...	...	...	1	...	...	...
3	Diseases of Respiration	...	...	1	...	...	...	...	...
4	„ Digestion	10	1	2	...	...	...	2	3
5	„ Spleen	...	...	...	...	...	...	1	1
6	Dis. of Genito-Urinary System	...	...	...	...	...	...	1	1
7	Childbirth, Diseases of Uterus	...	...	...	...	...	...	2	2
8	Diseases of Skin, Cellular Tissue	6	...	2	...	1	...	...	...
9	Syphilis	...	...	...	...	1	...	...	...
10	Rheumatism	3	...	1	...	3	...	...	...
11	Anomalous	...	...	...	...	...	...	1	1
12	Wounds	6	...	...	...	...	...	...	...
13	Cholera Spasmodica	1	...	...	...	...	...	29	29
	Total	41	2	15	...	6	...	57	59
1	Daily Average Number of Sick	18·83		7·83		4·6 in-patients 23· out do.		...	...
2	Ratio of Sick to Strength	3·42	per Cent.	3·38	per Cent.	...		...	...
3	Ratio of Death to Strength	·38		...		...		...	...
4	„ „ Treated	·48		...		...		...	...
5	„ „ Population of Town	...		...		...		...	...

Meteorological Register kept at Chittagong, for March, 1849.

Days of Month.	Thermometer at Sunrise.	At 10 A.M. Barometer.	Thermometer.	In. rain during preceding 24 hrs.	Aspect of Sky.	Direction of Wind.	Force of Wind.	At 4 P.M. Thermometer.	Aspect of Sky.	Direction of Wind.	Force of Wind.
1	60	30·04	72	...	Cumu.	...	0	75	...	...	0
2	60	30·07	72	...	„	...	1	76	...	...	0
3	62	30·08	74	...	„	...	1	78	...	...	0
4	66	30·10	74	...	„	...	1	81	...	...	0
5	68	30·03	74	...	„	...	1	78	Cumu	N.E.	0
6	66	29·98	76	...	„	...	1	79	„	...	...
7	66	29·98	78	...	„	...	0	79	„	S.W.	0
8	66	30·00	76	...	„	S.	0	79	„	S.W.	0
9	66	30·00	76	·19	„	S.W.	5	77	„	S.W.	0
10	66	30·04	76	1·43	„	S.	0	77	„	S.	1
11	66	30·04	75	...	„	S.	1	75	„	S.	1
12	69	...	78	...	„	S.	0	77	„	S.	1
13	68	...	78	...	„	S.	1	79	„	S.	1
14	68	...	78	...	„	S.	1	79	„	S.	1
15	69	29·97	78	...	„	S.	1	79	„	S.	1
16	70	30·05	78	...	„	S.	1	80	„	S.	1
17	69	...	78	...	„	W.	0	80	„	W.	0
18	66	...	78	...	„	S.	0	81	„	S.	0
19	70	...	78	·07	„	S.W.	0	81	„	...	...
20	65	...	68	...	O. P.	W.	5	80	...	...	...
21	62	...	60	1·40	O. R. J.	...	11	70	b.	S.	0
22	60	30·02	78	·07	B.	...	1	80	„	...	
23	60	29·96	73	...	B.	...	1	80	„	...	0
24	68	29·93	78	·10	O. M.	W.	1	78	G. m.	W.	2
25	70	29·94	76	...	Cumu.	S.	1	81	b.	S.W.	1
26	71	29·93	78	...	„	S.	1	80	„	S.	1
27	71	29·90	78	...	„	S.	1	82	„	S.W.	1
28	72	29·83	78	...	„	S.	2	82	„	S.	1
29	68	29·80	78	·12	b. c.	S.	2	82	Cumu.	S.	1
30	...	29·87	79	...	„	S.	2	82	b. c.	S.	2
31	73	29·90	80	...	Cumu.	S.	1	80	Cumu.	S.	1

Abstract for March, 1849.

Mean Observations.	Barometer.	Thermometer.	Total Inches of Rain.	Prevailing Wind.	Prevailing Clouds.
Sunrise	...	66·9	...	...	...
At 10 A.M.	29·97	75·83	3·38	1. S. 2. S.W. 3. N.W.	...
At 4 P.M.	...	79·	...	1. S. 2. S.W.	...

1. A singular haze, bearing a strong resemblance to that which is seen towards the close of the rains, covers the country.—8th. About 3 P.M., heavy clouds appeared in north-west, followed by thunder. This passed off, but about 12 at night much wind from north-west.—10th. At 10 P.M., much thunder and lightning, and the most violent gust of wind, lasting half an hour, I ever experienced in Chittagong.—20th. Heavy clouds at night, much thunder and lightning, and violent gusts of wind.—21st. Very severe north-wester at 10 A.M., blowing most violently, and hailstones, about ½ inch diameter, falling in large numbers.—23rd. Much fog in early morning. 5 P.M., a slight storm from north-west; thermometer fell to 73.—24th, At 6 P.M., heavy clouds and lightning in

The foregoing tables were constructed with the view of bringing into close apposition the amount of mortality and sickness, kinds of disease, and concomitant atmospheric influences, existing amongst and acting upon the three classes comprehending the population of Chittagong. One year's such observation affords very insufficient data for deductions regarding the influence of climate upon health, but it enables us clearly to ascertain the comparative mortality of three great and highly important social classes, viz., troops, prisoners, and the ordinary population, for that period. The broad facts of mortality, morbidity, and the mean indications of meteorological instruments, will be rendered more evident, by being grouped as below.

Column I of this table shews that the number of sick compared with the strength was very much greater amongst the troops than convicts, being no less for the whole year than 78·06 to 60·28. That a body of men enjoying perfect liberty, in the receipt of good allowances, prosecuting an honourable profession, and living well, both in regard to food and lodging, should suffer so much more from sickness than convicts, appears at first sight somewhat remarkable. Its explanation is however to be found in the fact that, whilst the latter were resident in their native land (Bengal), the Sipahis were subjected to all the evil influences of a foreign climate. In both classes, the four months of the rainy season proved the most productive of disease, remarkably so amongst the troops. Leaving the question of sickness, however, and considering mortality, we find on inspection of the second column that the military deaths during the whole year were only ·446, whilst those amongst the prisoners amounted to 6·963, or nearly 7 per cent. It must of course be remembered, that many of the native soldiers left Chittagong on sick leave, some to recover, others to die, both circumstances rendering the mortality small in appearance. I have no notes by me to show the number of men quitting their corps during the year under review, but I have a sufficient general remembrance to feel assured that had they all sunk under their diseases, the amount of mortality would have been still much less than that prevailing in the jail. The mortality of the town population, though appearing in column III as 2.6880, should be correctly estimated at 3 per cent., as mentioned in Appendix A; but even with this addition, it remains less than half that of the convicts. The largest proportion of deaths, both amongst the prisoners and town people, occurred in the cold season. As regards the latter, however, this preponderance is due to cholera; but for that, the rainy season would have shown the highest figure.

The meteorological observations are very incomplete. To obtain them in perfection, the daily condition of every known element of climate should be additionally included, as hydrometric state, electric tension, heat of sun's rays, and maximum and minimum thermometric readings. Instruments for making such observations were, however, unfortunately not at my command. I may be permitted, however, to make some brief remarks upon the climate of Chittagong, having been a resident of the station nearly two years before these observations commenced. Its principal characteristics are a moderate temperature, strong breezes, a large fall of rain, averaging 100 inches per annum, and great humidity. Men who arrive there in good health,

Months.	I. Daily Ratio of Sick to Strength per Cent.		II. Monthly Ratio of Deaths to Strength per Cent.			III. Monthly Ratio of Deaths to Treated per Cent.		Mean of Thermometer.		Mean of Barometer.	The Direction of Winds and Number of Days.	Total of Rain in Inches.
	Troops	Convicts.	Troops	Convicts.	Towns People.	Troops	Convicts.	At 10 A.M.	At 4 P.M.			
Hot Season.												
March, 1848	3·38	3·42	..	·38	·285	..	·48	75·83	·79	29·97	S.W. 5 S. 14 N.E. 1 W. 2 Still 9	3·3
April, 1848.	4·13	5·9	·446	1·4	·235	4·54	13·04	79·46	80·76	..	S.W. 17 S. 3 Still 10	5·3
May, 1848..	6·39	5·33	..	..	·22	..	..	79·13	80·43	..	S.W. 20 S. 7 S.E. 3 Still 1	13·4
June, 1848..	8·16	4·39	..	·51	·2115	..	9·95	78·2	78·5	..	S.W. 8 S. 13 S.E. 5 E. 1 Still 3	21·1
	22·06	19·04	·416	2·29	·9515							
Rainy Season.												
July.....	10·36	5·69	..	·51	·2115	..	5·71	79·21	79·9	..	S.W. 9 S. 7 S.E. 10 Still 5	8·7
August.....	14·27	5·80	..	·502	·21	..	8·33	79·75	·81	29·84	S.W. 11 S. 1 S.E. 13 Still 6	22·7
September..	12·84	5·75	..	·251	·13	..	2·85	81·96	82·7	29·60	S.W. 3 S. 8 S.E. 5 Still 9 N.W. 5	12·9
October	10·04	5·07	..	..	·195	..	..	82·81	83·66	29·93	S.W. 5 S. 4 S.E. 10 N.W. 3 Still 9	3·4
	47·51	22·31	..	1·263	·7465							
Cold Season.												
November ..	1·8	5·83	..	·225	·285	..	2·94	77·9	78·4	30·065	N.W. 12 W. 2 Still 16	3·6
December ..	2·54	5·67	..	1·15	·315	..	18·51	69·51	69·61	30·05	N.W. 25 Still 6	4·3
January	1·53	3·87	..	·945	·22	..	15·38	68·41	68·87	30·07	N.W. 28 S.W. 3	1·1
February...	2·62	3·56	..	1·09	·17	..	20·	73·62	75·29	30·	N.W. 14 S.E. 6 S. 5 Still 3	5.5
	8·49	18·93	..	3·410	·090							
Annual Totals.	78·06	60·28	·446	6·963	2·688							105·7

continue to enjoy it. Ladies frequently suffer from debility, without tangible cause. The winds, in the cold season, blow chiefly from the North-West; in the hot season, from the South-West; and the rains very equally, from South, South-West, and South-East. The first of these passes the cultivated country lying between the station and Tipperah, or if very northerly, across the forest lying towards Burmah; the second comes direct from sea; and the third from the same quarter. Whilst making the early part of the tabulated observations, I neglected to enter the important element of "force of wind," but it may be generally stated, that it blew strong throughout the year, with the exception of a short period, in the rains. These winds are much enjoyed by the healthy, and diminish the temperature to the sensation some 5 or 6 degrees below the thermometric reading. The delicate, however, often find great and debilitating perspiration result from their contact. The reputation which Chittagong possesses for afflicting Europeans with fever, is by no means a just one. During three years' residence, only two out of a large official staff suffered from the disease. Its most distinguishing characteristic is headache, the cause of which I never succeeded in discovering, or, unfortunately, in relieving. The cold season is very grateful, but in some measure detracted from by the heavy and damp fogs, which hang over the station until nine and ten o'clock. The hot season is, owing to the strong breezes above mentioned, scarcely a period of suffering. Many severe storms occur throughout, cooling the air, and causing a great thermometric range in the twenty-four hours, and consequently calling for caution in dress. The rainy season is also marked by storm, and rain falls sometimes continuously for five or seven days. This, of course, is rare.

I consider the position of the European dwellings as perfect, being situated on hills of sandy formation, from fifty to one hundred feet above the surrounding level. Purity of air and perfect drainage are thus obtained, whilst the freshness of the sea-breeze, and the cooling effect of the universal verdure, obviate the necessity of ever closing the house.

The present brief record can lead to no indications: it is merely introduced to demonstrate the way in which the daily or monthly state and progress of disease should be compared with simultaneous atmospheric phenomena. Ten years of such comparative records would, I am sanguine, afford some certain knowledge on the subject. The principal tables will also lead to a correct appreciation of the comparative mortality from each class of disease, in every month of the year. The whole subject of influence of climate upon health is replete with interest; and with the view of stimulating inquiry, I cannot do better than conclude with the summary of practical conclusions come to by Dr. Casper, of Berlin, the first living authority on the subject, and which of course admits of general application.

1. In Berlin, while the month of January is the least, December is the most, favourable to health.

2. The greatest number of deaths occur in Spring, and the smallest number in Summer.

3. Extremes of temperature are dangerous to life.

4. A high barometrical pressure tends to increase, while a low barometrical pressure tends to decrease, the rate of mortality.

5. The influence of atmospheric pressure on human life varies in different seasons.

6. No condition of the air is so dangerous to life as dry cold. On the contrary, humid cold has the greatest tendency to support life.

7. Of all the seasons of the year, the winter gives rise to the greatest number of cases of inflammatory diseases, while in the spring they are most fatal, especially cases of pneumonia.

8. Cold winters, and warm springs, summers, and autumns, increase the danger and fatality attendant on inflammation attacking the brain and respiratory organs; and *vice versâ*.

9. The maximum mortality from phthisis, occurs in spring; and after this season, in winter. The minimum mortality from this disease occurs in autumn and summer.

10. Variations in the state of the atmosphere appear to exert but little influence upon the relative number of deaths from phthisis.

11. Nervous fever is most frequent and fatal, in autumn; it is least frequent and fatal in spring.

12. The influence of the weather and seasons upon health vary with the different periods of life.

13. This influence is most marked in the ages of infancy and puberty, but it is least marked in the first septennial period of existence.

14. From the twentieth year upward, the winter is most dangerous, and the summer the most favourable season to life and health; and the older the individual, the more striking is this difference.

On the Immediate Effect produced on the Revenue by the Remission or Increase of Taxes. Communicated by Dr. Guy.

In considering the expediency of financial changes, three questions offer themselves for solution:—

1. If a given tax be reduced by a given amount, after how many years may the revenue from that source be expected to recover itself?

2. What will be the state of the revenue in the year following any given reduction or remission of taxes?

3. What will be the state of the revenue in the year following any given increase of taxation?

It is obvious that these questions do not admit of any precise answer; nevertheless, it may not be uninteresting or uninstructive to inquire what light experience is capable of throwing upon them. It will be convenient to take the last two questions first, as being the most easy of illustration, the first question being reserved for a future opportunity.

The scope of this communication, then, is very limited. It does not extend beyond the placing, in a convenient tabular form, of the

several numerical data which display the immediate effect on the revenue of the remission or increase of taxes, during the thirty-seven years from 1814 to 1850, inclusive. The figures are taken in part from Porter's Progress of the Nation, and in part from Mr. Cardwell's Parliamentary Return headed "Public Income and Expenditure, &c.," dated March 16, 1852. Mr. Porter's work has supplied the facts previous to the year 1822; for the remainder, I am indebted to the report in question.

Some of the columns of the table may require a few words of explanation. In the column headed "Increase or Decrease," the signs + and − have their usual signification, the first indicating that the revenue has been increased, the last that it has been diminished, by the amounts to which the signs are respectively attached. The figures in the column headed "Excess of Taxes reduced or repealed," are obtained by a simple process of subtraction. The asterisk indicates that the taxes increased or newly imposed exceed the taxes reduced or repealed. The mark (†) distinguishes the years in which taxes were newly imposed or increased, or taxes were reduced or repealed, without any countervailing reduction or augmentation. The column headed "Revenue restored, and surplus of," is merely a repetition, for the sake of distinctness and easy reference, of the figures to which the sign + is attached in the column headed "Increase or Decrease." The asterisk, in this as in the last column, distinguishes those years in which the taxes, increased or newly imposed, exceed the reduced or repealed taxes. In the column headed "Revenue partially restored to the extent of," the amounts are obtained by subtracting the figures representing the falling-off in the revenue from those which embody the amount of the reduction. The difference represents the extent to which the revenue has been restored. The figures in the last column are obtained by subtracting the excess of taxes reduced or repealed from the figures which represent the falling-off in the revenue; or, in the case of the figures distinguished by the asterisk, the excess of taxes increased or newly imposed less the increase in the revenue.

In the thirty-seven years comprised in the table, reductions of taxation, in excess of taxes increased or newly imposed, have taken place to the extent of upwards of forty millions sterling. In thirty-one out of these thirty-seven years, the taxes reduced or repealed have exceeded the taxes increased or newly imposed, or taxes have been reduced or repealed without any such drawback. In the remaining six years, the opposite state of things prevailed.

By a reference to the last three columns of the table, it will be seen that the thirty-one years admit of being grouped as follows:—

1. Revenue restored, with further increase	10	years.
2. Revenue partially restored	8	,,
3. Revenue not restored, and further falling off	13	,,
Total	31	,,
Revenue wholly or partially restored	18	,,

In the six years in which the taxes increased or newly imposed exceeded those reduced or repealed, the results were as follows:—

1. Amount of additional taxes realised, with further addition....	4 years.
2. Amount partially realised	2 ,,
Total.....	6 ,,

The following are a few illustrations of the most remarkable direct results of a remission of duties, as shown in the last three columns of the table.

1. *Revenue restored, and further increase.*

a. In the year 1823, the taxes reduced or repealed exceeded those increased or newly imposed by 4,090,893*l.* Nevertheless, the ordinary revenue in the following year (1824) exceeded that of the year 1823 by 693,642*l.*; so that the gain to the nation was 4,784,535*l.*

b. In the year 1845, the taxes reduced or repealed exceeded those increased or newly imposed by 4,522,586*l.* Nevertheless, the ordinary revenue in the following year (1846) exceeded the revenue in the year 1845 by 1,231,084*l.*; so that the gain to the nation was 5,753,670*l.*

2. *Revenue partially restored.*

a. In the year 1816, the taxes reduced or repealed exceeded those increased or newly imposed by 17,172,307*l.* In the following year, the revenue had fallen off 10,331,998*l.*; so that the loss sustained by the revenue fell short of the amount remitted by 6,840,309*l.*

b. In the year 1824, the taxes reduced or repealed exceeded those increased or newly imposed by 1,744,633*l.* But in the following year, the revenue fell off only 136,628*l.* The nation, therefore, gained by the transaction 1,608,005*l.*

c. In the year 1826, the taxes reduced or repealed exceeded those increased or newly imposed by 1,670,329*l.* But the revenue in the following year fell off only 43,909*l.* The gain to the nation, therefore, was 1,626,420*l.*

The three years 1848, 1849, and 1850, all belong to this category. In 1848, taxes were repealed or reduced to the amount of 578,896*l.*; but of this amount no less than 467,326*l.* were made good in the following year by the increase of other branches of the revenue. In 1849, the taxes repealed or reduced amounted to 384,584*l.*, of which 250,957*l.* were made good in the following year; and in 1850, the taxes reduced or repealed being 1,307,073*l.*, no less than 799,485*l.* were replaced by increased returns from other sources.

3. *Revenue not restored, and further deficiency.*

a. In 1815, the taxes reduced or repealed in excess of those increased or newly imposed amounted to 45,977*l.* In 1816, not only was this sum not made good, but the revenue was further diminished to the amount of 9,993,764*l.*

b. In 1818, the taxes reduced or repealed, in excess of those increased or newly imposed, amounted to 8,148*l.* In 1819, this sum was

not only not restored, but the revenue sustained a further deficiency of 1,176,852*l.*

c. In 1836, the taxes reduced or repealed, in excess of those increased or newly imposed, amounted to 943,980*l.* In 1837, this sum was not only not restored, but there was a further deficit in the revenue of 1,448,010*l.*

d. In 1844, the taxes reduced or repealed amounted to 426,089*l.* In 1845, this sum was not only not made good, but there was a further deficit in the revenue of 1,171,885*l.*

Out of the six instances in which the taxes increased or newly imposed exceeded those reduced or remitted, the two following are given as illustrations.

1. *Amount realized, with further addition.*

In 1842, the excess of taxes newly imposed exceeded those remitted or reduced by 4,026,952*l.* In the following year, this addition to the revenue was realized, with an addition of 342,136*l.*

2. *Amount not fully realized.*

In 1819, the excess of taxes newly imposed was 2,832,818*l.* Of this sum, only 1,763,649*l.* was realized in the following year, being less than the addition, by 1,069,169*l.*

The following summary is interesting:—

In the ten years in which the taxes reduced or repealed exceeded the taxes increased or newly imposed, the total of the taxes remitted or reduced, in excess of those increased or newly imposed, was 12,603,558*l.* In the years immediately following these ten years respectively, the revenue had not only recovered itself, but showed a further surplus, amounting in the aggregate to 14,099,694*l.* The gain to the nation in these ten years was, therefore, no less than 26,703,252*l.*

In the eight years in which the taxes reduced or repealed also exceeded those increased or newly imposed, but the revenue in the years following the eight years respectively was not completely restored, the total of taxes repealed or reduced, in excess of those increased or newly imposed, was 27,914,102*l.*, of which 13,666,983*l.* was replaced; so that the nation gained the sum of 14,247,119*l.* at the expense of the revenue.

In the thirteen years in which the taxes reduced or repealed also exceeded those increased or newly imposed; but the revenue in the years respectively following such remission of duties was not only not restored, but a further deficit took place, the total of taxes reduced or repealed in excess of those increased or newly imposed amounted to 9,184,753*l.*, which taxes were not only not made good, but a further deficiency to the amount of 18,197,223*l.* occurred, making together a total loss to the nation of 27,381,976*l.*

In the four years in which the taxes increased, or newly imposed, exceeded those reduced or remitted, and in which the amount of the additional taxation was realised, with a further increase, the additional

taxation amounted to 4,026,952*l.*, and the further increase of revenue to 2,604,919*l.*, so that the financial operation of those years proved eminently successful.

In the two years in which the taxes increased, or newly imposed, also exceeded those reduced or remitted, but in which the amount of the new taxes was not fully realised, the additional taxation amounted to 3,865,088*l.*, out of which sum only 2,329,607*l.* was realised.

Year.	Ordinary Revenue.	Ordinary Revenue in the year following.	Increase or Decrease.	Excess of Taxes Reduced or Repealed.	Revenue Restored, and Surplus of	Revenue Partially Restored, to the extent of	Revenue not Restored, and further Deficiency of
	£	£	£	£	£	£	£
1814....	70,103,344	71,372,575	+ 1,269,231	644,142	1,269,231	....	....
1815....	71,372,575	61,332,834	—10,039,741	45,977	....	....	9,993,764
1816....	61,332,834	51,000,836	—10,331,998	17,172,307	....	6,840,309	....
1817....	51,000,836	53,001,797	+ 2,000,961	28,504	2,000,961	....	....
1818....	53,001,797	51,816,797	— 1,185,000	8,148	....	....	1,176,852
1819....	51,816,797	53,580,446	+ 1,763,649	2,832,818*	....	....	1,069,169*
1820....	53,580,446	54,477,641	+ 897,195	115,602*	781,593*	....	....
1821....	54,477,641	53,652,473	— 825,168	425,467	....	....	399,701
1822....	53,652,473	51,508,376	— 2,144,097	2,123,963†	....	....	20,134
1823....	51,508,376	52,202,018	+ 693,642	4,090,893	693,642	....	....
1824....	52,202,018	52,065,390	— 136,628	1,744,633	....	1,608,005	....
1825....	52,065,390	49,625,485	— 2,439,905	3,256,869	....	816,964	....
1826....	49,625,485	49,581,576	— 43,909	1,670,329	....	1,626,420	....
1827....	49,581,576	51,665,077	+ 2,083,501	60,278	2,083,501	....	....
1828....	51,665,077	50,428,275	— 1,236,802	35,279	....	....	1,201,523
1829....	50,428,275	49,889,994	— 538,281	115,450†	....	....	422,831
1830....	49,889,994	46,293,646	— 3,596,348	3,292,630	....	....	303,718
1831....	46,293,646	46,833,796	+ 540,150	930,071	540,150	....	....
1832....	46,833,796	46,170,600	— 663,196	540,290	....	....	122,906
1833....	46,170,600	46,425,263	+ 254,663	1,460,043†	254,663	....	....
1834....	46,425,263	45,893,369	— 531,894	1,789,411	....	1,257,517	....
1835....	45,893,369	48,591,180	+ 2,697,811	157,377	2,697,811	....	....
1836....	48,591,180	46,199,190	— 2,391,990	943,980†	....	....	1,448,010
1837....	46,199,190	47,104,745	+ 905,555	396*	905,159*	....	....
1838....	47,104,745	47,688,910	+ 584,165	8,134*	576,031*	....	....
1839....	47,688,910	47,351,563	— 337,347	56,308†	....	....	281,039
1840 ...	47,351,563	47,917,521	+ 565,958	1,032,270*	....	....	466,312*
1841....	47,917,521	46,700,890	— 1,216,631	21,382†	....	....	1,195,249
1842....	46,700,890	51,069,978	+ 4,369,088	4,026,952*	342,136*	....	....
1843....	51,069,978	53,317,092	+ 2,247,114	366,453†	2,247,114	....	....
1844....	53,317,092	51,719,118	— 1,597,974	426,089†	....	....	1,171,885
1845....	51,719,118	52,950,202	+ 1,231,084	4,522,586	1,231,084	....	....
1846....	52,950,202	51,340,801	— 1,609,401	1,149,790	....	....	459,611
1847....	51,340,801	52,422,338	+ 1,081,537	343,211†	1,081,537	....	....
1848....	52,422,338	52,310,768	— 111,570	578,896†	....	467,326	....
1849....	52,310,768	52,177,141	— 133,627	384,584†	....	250,957	....
1850....	52,177,141	51,669,553	— 507,588	1,307,073†	....	799,485	....

Influence of Elevation on the Fatality of Cholera. By William Farr, Esq., F.S.S.

[Read before the Statistical Society of London, 19th April, 1852.]

Under the Act for the Registration of Births, Deaths, and Marriages, the name, sex, age, and occupation of every person who dies in England—as well as the time, place, and cause of death—are registered. The whole of this system of observation and record was in operation when cholera broke out in 1848. The quarterly abstract of deaths for the whole kingdom, and the London tables which are published weekly, presented notices of its rise, progress, and decline in particular districts. When the epidemic was over, it was deemed desirable to give a complete abstract of the facts. Accordingly a list of every case of death from cholera and diarrhœa, in 1849, was transcribed from the Registration volumes, which, in that year, contained 440,853 deaths. 1,105 persons died of cholera in the last three months of 1848; and 53,293 persons died of the same disease in 1849. Of diarrhœa 1,887 persons died in the same year. The deaths in Scotland and Ireland are at present unknown. The Registrar-General published the tabulated facts, and a report on the mortality of all the districts of England in a thick 8vo. volume, illustrated by a map and coloured diagrams.

I propose here to present a digest of one of the most important practical results of that inquiry. I refer to the influence of locality; particularly of elevation of habitation on the diseases and characters of men.

Locality.

By collecting the districts together in which the mortality was high, we find this striking result: that 46,592 of the 53,293 deaths from cholera in the year 1849 occurred in 134 of 623 districts; or in less than a seventh part of the area of England and Wales, among four parts in ten of the population. Only 6,701 deaths took place out of 10 millions of people on 49,228 square miles of territory.

In 85 districts of England and Wales no death from cholera was registered in 1849; not a single death from either cholera or diarrhœa was registered in 12 of those districts.

The only town of any magnitude in the 85 districts is Hereford. The other districts are made up of villages or small towns.

In the county of Hereford only *one* death from cholera was registered in 1849. This county lies high up the River Wye; the population is scattered, and engaged in agriculture: it is out of the line of railways. The common drink of the people is cider.

A straw-bonnet maker, aged 27, died of cholera in Kirkby Stephen on July 26th, 1849. It was the only death from cholera in Westmoreland.

The 85 districts which escaped the epidemic cholera in 1849, lay in general high, round the sources of rivers, and were thinly peopled. 13 in 208, or 6 per cent. of the districts on the coast escaped, while 72 in 415, or 17 per cent. of the inland districts, enjoyed immunity.

Mortality from Cholera in the Inland and the Coast Districts.

	Population, June 7th, 1841.	Population, March 31st, 1851.	Deaths from Cholera, 1849.	Deaths from Cholera to 10,000 Persons Living, 1849.
England and Wales	15,914,148	17,922,768	53,293	30
415 Inland Districts	9,478,050	10,433,333	17,052	17
208 Coast Districts.....	6,436,098	7,489,435	36,241	50

The cholera was three times more fatal on the coast than in the interior of the country. This is shown clearly in the table. 36,241 of the deaths from cholera occurred in the districts lying against the low navigable rivers and the seas; 17,052 in the interior of this circle; and as the population of the coast districts was nearly 7½ millions, and that of the part of the country within this circuit, 10½ millions, the mortality in the coast districts was at the rate of 50, in the inland districts at the rate of 17 in 10,000.

The character of the coast varies; and by a further analysis it is found that the fatality of cholera on the coast was greatest in the chief seaport districts. Thus 26,773, or more than half the deaths in the country from cholera, happened in the districts of or about London, Liverpool, Hull, Bristol, Plymouth, Portsmouth, Southampton, and Tynemouth.

London, having the mixed character of a seaport town and an inland city, may, for the present, be set aside: we have then three groups of coast districts.

The mortality in the great ports was at the rate of 125 in 10,000 inhabitants; in the 125 coast districts with small ports, often inaccessible to ships, the mortality in 10,000 was only 15; which is one-eighth part of the mortality in the great, one-third part of the mortality (47) in the secondary ports.

Cholera reigned wherever it found a dense population on the low alluvial soils of rivers, round the estuaries of the Thames, the Humber, the Mersey, the Severn, the Tamar, and their tributary waters.

Certain cities and towns lie on the same rivers at different elevations, and are intimately connected; the one is the port and entrepôt, the other the manufacturing seat and centre of the surrounding country. Liverpool, Manchester, and other districts are thus related. It will be found that cholera prevailed at both extremities of the connecting line; but that it was almost invariably most fatal in the port or district lying lowest down the river.

Two large groups of districts have been thrown together. 1st. The 47 districts on the river and sea margins, which comprise the principal ports except London; and 41 of the large town districts in the interior of the country, seated also on rivers, but nearer their sources, and at higher elevations. The inland districts are more densely peopled than the maritime districts; and the mortality, in ordinary times high in both regions, is highest in the inland towns; yet *the cholera* in the low sea-side districts destroyed 85 in 10,000 of the inhabitants, while in the inland towns it was fatal to 38 in 10,000

of the inhabitants. The fatality was as $2\frac{1}{4}$ to 1. The metropolis, with its mixed population, experienced an intermediate mortality; 62 in 10,000 of the inhabitants died of cholera. The mortality from cholera in the rest of the kingdom, on smaller streams and higher ground, was at the rate of only 12 in every 10,000 of the 11 millions of the people. It is worthy of observation, that while diarrhœa was fatal to 17 in 10,000 of the people in those districts, it was fatal to 17 or 18 in 10,000 of the people inhabiting each group of the town districts.

From the want of data, we cannot give the exact elevation of the districts; but we have here the facts that while the mortality from cholera was much higher in the three groups of dense town districts, rapidly increasing by the influx of immigrants, than in the rest of the country, the other elements—(1) of depression, (2) of alluvial soil, or (3) of whatever characterises our seaport towns, are of primary importance. In some of the large inland towns the cholera was scarcely at all fatal; the deaths it caused in 1849 in Cambridge were only 5, Colchester 4, Cheltenham 6, Hereford 0, Stafford 3, Birmingham and Aston 35, Leicester 2, Lincoln 7, Nottingham 18, Derby 18. It destroyed 202 lives in Coventry, 116 in Shrewsbury, 174 in York, and 165 in Salisbury; but of the 8,193 deaths from cholera, 3,438 took place in Leeds, Hunslet, Manchester, and Salford, which are great towns intimately connected by railways, canals, and roads, with Liverpool and Hull; and 3,047 in Wolverhampton and Merthyr Tydfil. Subtracting the 6,485 deaths from cholera in these 6 districts, 1,708 deaths remain, which represent the deaths from cholera in 35 of the largest inland town-districts of the kingdom.

The low-lying towns on the coast were all attacked by cholera. Scarborough, King's Lynn, and Deal in the Eastry District, on the coast, enjoyed as much immunity as the inland towns; they were the only considerable towns on the coast that escaped.

	Population.		Annual Rate of Mortality per Cent.		
	Annual Increase per Cent. 1841–50.	Density—Persons to 10 Acres in 1849.	From all Causes. 1841–50.	Cholera in 1849.	Diarrhœa in 1849.
47 low River and Sea-side Town Districts	1·822	9	2·531	·849	·168
36 London Districts	1·945	293	2·480	·619	·171
41 inland Town Districts	1·542	13	2·573	·375	·176
499 Districts, including chiefly small towns, and the country population	·861	3	2·073	·121	·070

Cardiff is the port of the Merthyr Tydfil district. Situated in the interior, the centre of the great Glamorganshire iron works is about 20 miles from Cardiff, with which the Cardiff Canal, the Taf River, and the roads connect it. Cardiff and Merthyr Tydfil are therefore connected with each other in the same way as the towns previously

referred to; but in this respect they differ, that the mortality is greater in the high district than in the low port town.

Cholera attacked the greater part of the districts on the coal-fields of England, and was most fatal in the denser masses of the mining population. Mining operations have, in all times, and in all places, been fatal to man: chiefly in consequence of the negligent habits of the people, and the absence of the health regulations which exist in towns possessing a municipal organization. The ground on the coal-formation may have lent the epidemic fatality.

A few scattered cases occurred in the marshy districts of Lincolnshire; but the mortality was inconsiderable, and below the average. The marsh districts in the interior of Cambridgeshire also escaped, down to the Ely district; North Witchford, Whittlesey and Wisbeach suffered. So did some of the marsh districts of Essex and Kent on the estuary of the Thames. In the Romney Marsh district only one death from cholera occurred.

Much information is accessible respecting the districts of London, and during the progress of the epidemic, opportunities were afforded of observing the effects of the varying conditions of place and population on the mortality. The first cases of the epidemic appeared in the heart of the port; and it was noticed at an early period that the mortality was much higher on the south side than on the north side of the Thames. The south side of the river is low and badly drained; and it was deemed desirable to ascertain if possible the state of the sewers and drainage in every district, in order to determine the effects of emanations from the soil.

The Sewers' Commission had an underground survey in progress, but it was incomplete. The Ordnance Survey supplied the elevation of the different parts, and in the absence of more precise information, it was thought that the elevation would at least furnish a good general notion of the natural drainage of the London districts.

For the investigation of the effects of the Thames, the water-supply, density, wealth or poverty, I must refer to the Report; I proceed at once to the consideration of *Elevation.*

The elevation of the soil in London has a more constant relation with the mortality from cholera than any other known element. The mortality from cholera is in the inverse ratio of the elevation. The mortality of the 19 highest districts was at the rate of 33 in 10,000, and of the 19 lowest districts 100 in 10,000. The mean elevation in the two groups was as 71 to 10 feet above the high-water mark of the Thames, or as 7 to 1; while the mortality was as 1 to 3, or in the inverse ratio. In the two groups of the 6 districts, supplied with the waters of the Thames at Kew and Hammersmith, the mean elevation was 35 and 175 feet, the mortality from cholera 19 and 11 in 10,000. In the two groups of 12 districts, supplied with the Thames water between the Battersea and Waterloo Bridges, the mean elevations were $\frac{1}{3}$ foot and 10 feet; the mortality 168 and 77 in 10,000. In the two groups of 20 districts, supplied with the waters of the New River and the Lea, the mean elevation was 24 and 59$\frac{1}{2}$ feet; the mortality from cholera was 59 and 37. While the effects of the water and of the wealth of the districts are apparent, they do not, in this analysis, conceal the effects of elevation.

Cholera was excessively fatal in all the four districts which lie on a level with, or below the Trinity high-water mark; it destroyed 144, 161, 164, and 205, in 10,000 inhabitants. In the five districts which lie 2 to 4 feet higher, on an average, the mortality from cholera was at the rate of 68, 97, 120, 153, and 181 in 10,000. Westminster experienced the lowest mortality (68) in the 9 low districts, and it is supplied with water by the Chelsea Company; while all the other districts are supplied by the Lambeth and Southwark Companies. In 10 districts, of an elevation of 50 feet and upwards, the mortality from cholera was at the rate only of 8, 8, 17, 19, 22, 22, 25, 35, 35, and 53. The mortality from cholera was not higher than 35, except in the district of St. Giles, which is an exceptional case: its elevation being 68 feet above the Thames, and the mortality from cholera at the rate of 53 in 10,000. It is a mixed district, and contains, in near proximity, the British Museum, Bedford Square, Russell Square, and Great Russell Street, where no death from cholera occurred; and Church Lane,—a low, damp, dirty lane, generally covered with decaying vegetables, and filled with a wretched population, where *thirty deaths* from cholera happened, in addition to its quota of 109 patients who from all parts of the district, were sent to, and died from cholera in, the Union workhouse.*

Notwithstanding the disturbance produced by the operation of other causes, the mortality from cholera in London bore a certain constant relation to the elevation of the soil, as is evident when the districts are arranged by groups in the order of their altitude. We place the districts together which are not on an average 20 feet above the Thames, and find that on this bottom of the London basin the mortality was at the average rate of 102 in 10,000: in the second group, at 20 and under 40 feet of elevation, or on the second terrace, the mortality from cholera was at the rate of 65 in 10,000; in the third group, or on the third terrace, 40 to 60 feet high, the mortality from cholera was at the rate of 34 in 10,000; in the fourth group, 60 to 80 feet high, the mortality from cholera was at the rate of 27 in 10,000; in the fifth group, 80 to 100 feet high, the mortality was at the rate of 22 in 10,000; in a district 100 feet high, the mortality was 17 in 10,000; in Hampstead, about 350 feet high, the mortality was 8, or deducting a stranger infected at Wandsworth, but who died there, 7 in 10,000.

By ascending from the bottom to the third terrace, the mortality is reduced from 102 to 34; by ascending to the sixth terrace it is reduced to 17. It will be observed, that the number representing the mortality on the third terrace is one-third of the number 102, representing the mortality on the first; and that the mortality on the sixth terrace is one-sixth part of the mortality on the first. And a series approximating nearly to the numbers representing the mortality from cholera, is obtained by dividing 102 successively by 2, 3, 4, 5, 6.

A comparison of the numbers of this series with the actual mortality experienced in each district, will serve to indicate roughly as much of the effect as is due to elevation; and the deviations from the scale are generally explained by the other elements of the problem.

* See Report on Church Lane and its vicinage in the *Journal* (vol. xi., p. 4, 1848,) *of the Statistical Society of London.* See also, in the same volume, a valuable paper on St. Giles's district, by Horace Mann, Esq., Barrister-at-Law.

The mortality from cholera on the ground under 20 feet high being represented by 1, the relative mortality in each successive terrace is represented by $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$: or the mortality on each successive elevation is $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{4}{5}$, $\frac{5}{6}$, &c. of the mortality on the terrace immediately below it.

The elevation of the five terraces may be represented by 10, 30, 50, 70, 90 feet. The elevations of the two higher districts are 100, and 350 feet. It will be observed that the mortality at 100 feet is 17, at 50 feet 34 in 10,000; consequently *at half the elevation the mortality is doubled.* The half of 50 feet is 25 feet; and the double of the mortality, 34, is 68. Now observation gives 65 in 10,000 as the mortality at 30 feet of elevation. As the processes of dividing the elevation, and of multiplying the mortality by 2, may be carried on *ad infinitum*, it is evident that the mortality is not strictly in the inverse ratio of the heights of the soil: otherwise at the elevation 12·5, 6·25, 3·125 feet, the mortality would be 136, 272, 544.*

* Let e be any elevation within the observed limits 0 and 350, and c be the average rate of mortality from cholera at that elevation; also let e' be any *higher* elevation, and c' the mortality at that higher elevation. Then if the mortality from cholera is inversely as the elevation, we shall have the proportion

$$e : e' :: c' : c = \frac{e'}{e} \cdot c'.$$

By adding a constant element, a, the velocity at which the mortality increases, particularly at the lower elevations, can be retarded to any extent. The equation then assumes the form (1) $\frac{e' + a}{e + a} \cdot c' = c$. The value of a can be most readily obtained by taking $e' = 90$, where the mortality was 22; and $e = 0$, where, in three districts, on a level with the Thames at high water, the mortality was 177 in 10,000 on an average.

From Eq. 1 the value of a in general terms is found to be $a = \frac{e'c' - ec}{c - c'}$.

Inserting the above numbers, we have

$$a = \frac{90 \times 22 - 0 \times 177}{177 - 22} = \frac{1980}{155} = 12{\cdot}8.$$

As the series is not perfectly uniform, different values of a are obtained from the formula; and 13 is an intermediate value of a, which has been employed in the construction of the annexed table, by making e successively 0, 5, 10, 15, . . . 110, 150, 200, 250, 300, 350, in the equation—

$$c = \frac{90 + 13}{e + 13} \cdot 22 = \frac{103 \times 22}{e + 13} = \frac{2266}{e + 13}.$$

Upon comparing the numbers of this series with the mean mortality observed in the districts at eight different elevations, it will be observed that the only considerable discrepancy is at the mean elevation (20 — 40) assumed to be 30 feet. The excess of mortality is in Wandsworth, West London, and Bethnal Green.

Mean Elevation of the Ground above the High-water Mark.	Mean Mortality from Cholera.	Calculated Series.
0	177	174
10	102	99
30	65	53
50	34	34
70	27	27
90	22	22
100	17	20
350	7	6

The houses necessarily raise the people of London above the ground; and if their *habitat*, day and night, is on an average 13 feet above the ground level, it is evident that the mortality *within the limits observed, is in the inverse ratio of the elevations at which the people live.* The causes of the discrepancies in particular districts are partly explained by differences in the wealth of the people and other causes which are noticed in the Report.

London Districts, arranged according to the Elevation of their Soil.

Number of Districts.	Elevation in Feet above Trinity High-water mark.	Observed Average.						
		Annual Mortality to 10,000 Persons Living.		Number of Persons to		Average Annual Value of		Poor Rate in the £ of House-rent, 1842–43.
		Cholera (1849).	All Causes (1838–44).	An Acre.	A House.	Houses.	House and Shop room to each Person.	
						£	£	£
16	Under 20 ft.	102	251	74	6·8	31	4·645	·072
7	20— 40 ,,	65	237	105	7·6	56	7·358	·071
8	40— 60 ,,	34	235	184	8·5	64	7·342	·056
3	60— 80 ,,	27	236	152	8·8	52	6·374	·049
2	80—100 ,,	22	211	44	7·7	38	5·183	·036
1	100 ,,	17	227	102	9·8	71	7·586	·043
1	350 ,,	8	202	5	7·2	40	5·804	....
All London		62	252	29	7	40	5·419	·063

The relation discovered between the elevation of the soil and the mortality from cholera is so important, that it was thought right, after the above calculations were made, to submit the principle to another test, by comparing the elevation and the mortality from cholera of *each sub-district.* The table in subsequent pages, although it makes the mortality on the lowest level less, and is deranged by the deaths in hospitals and workhouses, entirely confirms the announced law.

Why is the Cholera Fatal in Low Places?

Cholera has not only been most fatal in the low, and least fatal in the high parts of the country, but the fatality has diminished proportionally as the dwellings of the population have been raised above the sea level. The epidemic began and was most fatal in the ports on the coast; and in ascending the rivers step by step, we saw it grow less and less fatal. This made it probable that a certain relation existed between elevation and the power of cholera to destroy life. The more exact information which we possess respecting the London districts establishes this connexion beyond doubt. The relation may not be expressed by the same figures in other places, or in London at other times, but it will always be the general rule that the *mortality of cholera is inversely as the elevation of the people assailed above the sea-level.*

Mere density of population had not the same direct effect of increasing the mortality in this disease as in others; for in many

inland towns, and in high, dense parts of London, the mortality was slight or inconsiderable. Neither does the mortality from cholera vary in the London districts in any ratio of the density. Still density and numbers of people are not to be lost sight of; for the cholera was not fatal to many inhabitants of thinly-peopled, though low and marshy parts; while in such localities it was very fatal in nearly all towns. The law is, that the mortality in *towns of some extent and density* is inversely as the elevation.

The wealth of different places differs in amount and distribution. The differences in wealth and poverty probably have an effect on the mortality. But abstracting the indirect effect of the selection of sites and the supply of water, the great differences in the wealth of the London districts do not enable us to detect a very marked or constant influence of this element on the mortality from cholera. In the country at large there is no reason to believe that the wealth of the inhabitants increases as we ascend the high grounds which the cholera left unscathed. The reverse is probably the fact.

Elevation of the land involves several conditions which have an important effect on life and health. As we ascend, the pressure of the atmosphere diminishes, the temperature decreases, the fall of water increases, the vegetation varies, and successive families of plants and animals appear in different zones of elevation. The waters roll along the surface of the rocks, or filter through them and the porous strata of the earth to burst out below—the sources of rivers, or of tributaries which carry disintegrated rocks, with the remains and excretions of vegetables, animals, or men, in every stage of decomposition. The deposits in stagnant places, and at the estuaries, show the kind and quantity of mixed matter which the laden rivers carry down and deposit on the low margins of the sea at the tidal confluences of the fresh and salt waters.

If we take a series of towns on a river it is evident that the refuse matter of the first town will pass through the second; of the first and second through the third; of the first, second, and third, through the fourth; and so on to the lowest town, which will be traversed by all the unevaporated and unwasted organic matter that has found its way into the waters on their way to the ocean. As the transformation of decaying organic matter into inorganic and innoxious elements is constantly going on, it will be in many cases completely decomposed in its course. What has been said of the refuse of towns will apply to the leaves of the forests, and to vegetable remains of all kinds.

As the rivers descend, the fall of their beds often grows less, and the water creeps sluggishly along, or oozes and meanders through the alluvial soil. The drainage of the towns is difficult on the low ground, and the impurities lie on the surface, or filter into the earth. The wells and all the waters are infected. Where the houses are built on hill-sides and elevations, as in London, the sewage of each successive terrace flows through the terrace below it, and the stream widens, the ground becomes more charged, every successive step of the descent, until it is completely saturated in the parts lying below the high-water mark.

The river, the canals, the docks, and the soil of a port may be viewed as a large basin full of an almost infinite variety of organic

matters, undergoing infusion and distillation at varying temperatures; and as the aqueous vapour which is given off ascends, it will be impregnated with a quantity of the products of the chemical action going on below, variable in amount, but necessarily greatest in the lowest and foulest parts. The emanations, mixing with the superincumbent atmosphere, ascend like smoke; but at the same time become less and less dense by dilution and by the gradual destructive decomposition.

From an eminence, on summer evenings, when the sun has set, exhalations are often seen rising at the bottoms of valleys, over rivers, wet meadows, or low streets; the thickness of the fog diminishing and disappearing in upper air. The evaporation is most abundant in the day; but so long as the temperature of the air is high, it sustains the vapour in an invisible body, which is, according to common observation, less noxious while penetrated by sunlight and heat, than when the watery vapour has lost its elasticity, and floats about surcharged with organic compounds, in the chill and darkness of night.

The amount of organic matter, then, in the atmosphere we breathe, and in the waters, will differ at different elevations; and the law which regulates its distribution will bear some resemblance to the law regulating the mortality from cholera at the various elevations. It has been seen how rapidly in London the mortality from cholera diminishes a few feet above the low ground on a level with the Thames, while several feet of elevation in higher regions produce no sensible effect. The same thing holds in drainage. The ground on a level with the outlet cannot be drained at all, while a few feet of elevation make drainage practicable, efficient, and easy. And the law holds that while a few feet of elevation are so important near the outlet, they are of little or of no importance on the higher lands of the country. The diagram at page lxv of the Report represents roughly the facilities of drainage, as well as the mortality from cholera at the several elevations.*

It is established by observation that cholera is most fatal in low towns, and in the low parts of London; where, from various causes, the greatest quantity of organic matter is in a state of chemical action; and it may be admitted that cholera, varying in intensity with the quantity, is the result of some *change* in the *chemical action* of this matter; leaving it open for further inquiry to determine whether, in England, that change is spontaneous, or the result of the introduction of a zymotic matter from beyond the seas; whether the poison enters the human frame in air or water, through the skin, the mucous membranes, or the air-cells of the lungs.

If the facts are so, it follows, that cholera will not only be fatal on low ground, but on high ground, if, from any concurrence of circumstances, the conditions exist there which are so constantly found in alluvial soils, lying on a level with or below the tidal waters. Now these conditions did exist in nearly every place severely visited by cholera on ground much above the sea-level; in Salisbury, Merthyr Tydfil, Bilston, Newcastle-under-Lyne, and Church-street St. Giles, London.

The atmospheric pressure and the temperature diminish with the

* See Table relative au Mouvement de l'eau dans les Canaux et Rivières: in Leçons de Mécanique Pratique, par A. Morin, 2e Partie Hydraulique, p. 71.

elevation; and it is easy to conceive that either may exercise considerable influence when the elevation is considerable. The rarity of the atmosphere, or the perpetual snow on the Himalaya and the Alps, may be alleged as the causes why the epidemic never crossed their passes. It has been shown that an elevation of ten feet above the water level diminishes the mortality from cholera very considerably; while a difference of *ten* feet, at the higher elevation of 100 feet, has little effect on the mortality of that disease. The variations of *temperature* and of *pressure* follow laws entirely different, and are too slight at elevations differing only ten feet to be the direct cause of the great difference in the mortality of cholera.

Certain diseases arise when men are crowded together in close dirty gaols, camps, or hospitals; when they inhale morbid exhalations, or are placed in contact with others labouring under such zymotic diseases as small-pox; and when they reside in marshy countries. The explanation of the diffusion of cholera by an organic matter is therefore consonant with what is known of the etiology of other diseases.

In this, as in other zymotic diseases, great multitudes of the people who in one way or other take an average dose of the poison resist its influence: and it may be admitted that the numbers attacked bear some proportion to the quantity of the specific matter in the air, water, or earth of the place where they dwell. This specific matter is known only by its effects; but it has been shown that the deaths from cholera vary in some proportion to the quantity of organic matter in the state so commonly observed in the low parts of low towns. Our generalization then goes to this extent, that the cause of cholera is some chemical modification of organic matter; and here is the great practical fact—that *although elevation of habitation, with purity of air and purity of water, does not shut out the cause of cholera, it reduces its effects to insignificance.*

Origin of the Cholera Epidemic in the Delta of the Ganges.

Cholera has prevailed in many parts of the civilized world, and has probably not spared unexplored regions of whose barbarous inhabitants little or nothing is known. It appears to have followed everywhere the same general laws; affecting most fatally the low seaports and the cities near the mouths of rivers, and sparing the inhabitants of high grounds around the river sources. The physical circumstances of the country in which cholera first assumed the epidemic form throw great light on the causes of its mortality in other places. India was at the time covered by an intelligent band of army medical officers. They were called upon for returns which were made the basis of official reports, in Bengal by Jameson, a man who like Pringle, Lind, Jackson, Blane, and Martin, had the genius of medical topography; by Scott in Madras, who drew up a judicious and able report on the ravages of the disease in that presidency; by Steuard and Phillips in Bombay. Annesley, Kennedy, and Orton have described and analyzed the disease; Martin has written a medical topography of the country; Colonel Sykes, in the papers which have appeared in this journal, has embodied the later returns; so that the information respecting the origin and history is more complete in respect to this than to any other great epidemic.

The Indian epidemic began in the Delta of the Ganges. Mr. Orton thus sums up the evidence of the Reports :—"The epidemic had not one but various local sources in the level and alluvial, the marshy and jungly tract of country which forms the Delta of the Ganges, and extends from thence to the Burrampooter. For here we find it as early as June and the beginning of July, 1817, noticed as prevailing to a serious extent in Nuddea, a province which is stated to be notorious for the disease in its endemic form, and in Dacca." "Jessore, the place in which the disorder first put on a very malignant form, is," says Jameson, "a crowded, dirty, ill ventilated town, surrounded by a thick jungle, and in the rains by an immense quantity of stagnant water. * * In Sylhet the influence of situation was perhaps more remarkable than in any other quarter. * * It appeared that the villages in which it raged most extensively were considered by the natives as comparatively unhealthy and obnoxious to fevers of the intermittent type; being exposed to the effluvia arising from marshes and extensive lakes, in which the Zila abounds, particularly towards the south-west division, where the greatest number of victims fell. The Sepoy lines, on the contrary, being placed from sixty to a hundred feet above the general level of the country, had scarcely any cases excepting such as occurred in persons on guard at the different outposts.

"In Calcutta, again, the disease was, from first to last, most prevalent in the lower parts of the town and suburbs, as the Bura Bazar, Simeleia, Dyahutta, and Suwah Bazar; and in the suburbs, the villages of Khidderpore, Bhuwanipore, Manicktolla, Kurrya, Entally, Chitpore, and Sealdah.

"These dependencies are everywhere intersected by pools, broad ditches, and channels, which, being imperfectly drained, are in the rainy season always full of stagnant water and rank weeds.

"From this plentiful source of corruption, foul air is constantly given forth; and as all ventilation is obstructed by large groves of trees and vegetation of every description, it is there concentrated until it becomes entirely unfit for the purposes of respiration.

"The miserable condition of the generality of the inhabitants of these villages is hardly to be imagined. Each hamlet is made up of many mud or straw huts, generally from six to twelve feet square, placed so close to each other as to leave scarcely room to pass between. In every one of these wretched hovels a whole family, sometimes consisting of six or eight persons, resides; and, not unfrequently, cows, pigs, and other domestic animals, add to the filth and foul atmosphere in which they abound. The singularity is not that persons so situated should be more than others subject to the influence of a prevailing epidemic, but that they should ever be free from maladies of this description.

"The higher classes of natives, and Europeans generally, inhabiting the better raised and more airy parts of the town, suffered proportionably less than the lower ranks."* Such was the condition of a large part of the dense population in the birthplace of cholera. The returns of the mortality among the natives are very imperfect; but they show

* Report on Epidemic Cholera Morbus in the Presidency of Bengal, in the years 1817-18-19, by James Jameson, Esq.

that while many thousands perished in Calcutta and the districts on the Ganges as far as Allahabad, the casualties higher up the river were "comparatively fewer: in Agra the deaths did not exceed 10 daily, although the town contained 30,000 people. Not 500 in all died in Muttra; and about a like number died in the immense city of Delhi."

Mr. Jameson and Mr. Scott give other examples of towns and camps on low grounds suffering severely, and of elevated spots escaping with little loss; they also cite, exceptionally, instances of camps and cities on high grounds suffering attacks of great severity, or of high places escaping for a time and being assailed in after years. The early Indian returns of mortality were imperfect, and often incorrect: the relative elevation is rarely stated; it is impossible, therefore, to determine how far the law deduced from the English returns regulates the Indian observations. The general result is summed up by Mr. Jameson in words as precise as the observations justified:—"There is abundant proof that in *high, dry, and generally salubrious spots, it was both less frequent in its appearance and less general and fatal in its attacks than in those that were low and manifestly unwholesome.*"

The Great Pestilences of the present day are all most fatal in Low Places.

The influence of elevation, if not as obvious in other zymotic diseases as it is in cholera, is equally important, for they are all governed by similar laws.

Ague and Remittent Fever.—The marsh-fever, of the intermittent, remittent, and continued form, exists in parts of England, and of almost every kingdom of the world.

The fever of the Mediterranean appears to be a milder form of the remittent of the tropics. Its type is well seen in the Tuscan Maremma, which has been recently described by A. Salvagnoli Marchetti, in two Reports published by the Grand Duke of Tuscany.*

The Tuscan Maremma lies along the Mediterranean: commencing at San Vicenzio, it extends to the river Chiarone on the borders of the Papal States. It is chiefly in the province of Grosseto, and comprises a considerable territory of mountain, hill, and beautiful plain. A map accompanies the Reports, and shows, by a yellow colour, the parts in which malaria prevails; by a red colour the parts where the malaria is less pernicious. The yellow colour stretches from ten to sixteen miles into the interior, over the low plains traversed by the waters, and the red colour runs higher up the rivers Cornio, Ombrone, and Albegna. The high land round the river sources, even where it approaches the coast, is white, healthy, untouched, except in a few exceptional cases. The insalubrity is at its maximum in the plains, slight among the hills, inappreciable in the mountains. Ten towns and castles are mentioned that are abandoned by the greater part of the inhabitants every summer. Some are far from the sea, some far from the marshes. Montepescali is 760 feet above the level of the sea, Capalbio is still higher, and Sovana is as high as 1,012 feet. The malaria is felt, in some cases, as high as 1,400 or 2,000 feet; it never arrives at Montorsajo, 2,500 feet (1,217 braccia) above the sea. Dr. Marchetti notices that the blood of the inhabitants of the Maremma is changed: all the

* Statistica Medica delle Maremme Toscane, 1840-41-42-43-44. Firenze, 1844.

physicians, he says, who have attentively examined it, are struck by the character it presents, which is so constant and striking that by the blood alone you can distinguish the patient living habitually on a malarious soil from a person residing in a healthy country. A chemical analysis, by Professor Cozzi, shows a deficiency of fibrine, albumen, fatty matter, and phosphates, and an appreciable quantity of cholesterine. Nutrition is feeble, digestion bad, the liver disordered, the spleen swollen, respiration weak; the heart is flaccid and beats feebly. The countenance is of a palish sallow tint, as in a chlorotic girl, or yellow, as in jaundice. The muscular movements are languid, bodily exercise fatiguing. Sensibility is diminished. Strangers in the malaria speedily feel its effects; they undergo a great change, and soon acquire the constitution of the inhabitants of the Maremma. The agriculture of the Maremma is in the rudest state, the dwellings are miserable, and there is no industrial manufacture. Such is the effect of the low lands of Italy on the population, not only of the Tuscan Maremma but of the Pontine Marshes and all the other depressed parts of the Mediterranean coast. The land of the coast of the Adriatic is traversed by rapid rivers, and it is comparatively salubrious, except at Ravenna, where the Apennines retreat from the sea.

Yellow Fever is also generated in and almost confined to lands of low elevation. The Delta of the Mississippi, in the Gulf of Mexico, is its great centre.

"Près de la Vera Cruz," writes Humboldt, "la ferme de l'Encero, que j'ai trouvée élevée de 928 mètres au-dessus du niveau de l'océan, est la limite supérieure du *vomito.* Nous avons déjà observé plus haut, que c'est jusque là seulement que descendent les chênes Mexicains, qui ne peuvent plus végéter dans une chaleur propre à développer le germe de la fièvre jaune."*

Vera Cruz lies on the coast, against the island of San Juan de Ulloa. The merchants have country houses in Xalapa, at an elevation of 1,320 metres above the ocean, where they enjoy the fresh air, fine views, and clear sky; while the musquitoes, the heat, and the yellow fever plague the people below. The wind blows north, and a fog hangs over the Xalapa in winter; the sun and stars are covered for two or three weeks together. But this does not bring the fever.

The yellow fever does not extend its ravages in the epidemic form beyond the 46th degree of north latitude. New Orleans, Charlestown, Baltimore, Philadelphia, New York, Boston, and the low cities and ports on the coast of America, have all been visited by this pestilence; but its violence diminishes in the northern latitudes, and everywhere fades away in the high inland cities. In the Mediterranean, it has several times assailed Spain, appearing first and committing its greatest ravages in Cadiz, Seville, Malaga, Carthagena, Barcelona, and the other ports, radiating into the interior with diminished violence, and proving but rarely fatal on such high places as Gibraltar. In Catalonia, as in the West Indies, it enters with extreme difficulty elevated, airy localities; in the words of M. Pariset and his colleagues, passionate contagionists:—"*Elle aime les bords de la mer et des fleuves;* et, chose étrange, elle attaque indifférément les populations qui occuppent

* Essai politique sur le Royaume de la Nouvelle Espagne, tome ii., p. 771.—Humboldt.

les lieux sains, comme celles qui résident sur un sol insalubre." It attacks low places reputed healthy, and in that respect resembles cholera; but the documents of the French physicians throw no light on its relative mortality in high and low localities.*

The West Indies and the West Coast of Africa in the tropics are decimated by a deadly remittent fever which is closely allied to yellow fever. Lind, in the last century, after a comprehensive survey of the facts, observed that "not only continents, but most large islands in every quarter of the world, have ridges of high mountains, where the air proves healthy to European constitutions; even in the smaller islands, such a retreat can generally be found."† He strongly urged the Europeans in Jamaica to reside in temperate and pleasant situations on the sides of the mountains, where the ground is cleared from wood, and has no stagnating water upon or near its surface; where the soil is rich and fertile, favourable to the cultivation of European plants, and to the health of European animals.

Notwithstanding Lind's representations, "the principal West India towns, and the garrisons for the troops, are situated on the leeward shores of the country, *at the bottom of the deepest bays that can be found*, as a protection to their trade against the winds from the sea. The soil must consequently be alluvial, and is often marshy. * * * Their elevation is little above the level of the sea. * * * The settlements of the planters, in like manner, are formed, not on the elevated mountain-ridge, from which the periodical rains have washed away the soil, but in the alluvial ground beneath. * * * Ague is not a common production in the *hot low land, on or near the level of the sea, where alone the yellow fever is found.*"‡ These low towns and plantations, which were the resort of yellow fever, have since been ravaged by cholera; the intensity of the disease has shown how constantly, and in what variable circumstances, the law of elevation operates. Mr. Parkin, who was on the spot, states that the epidemic also ascended the hills; but he has not the means of giving the mortality at different elevations.

How the low alluvial shores of the West Coast of Africa, and of the rivers near the coast, are infested by the fever, is well known. The fatality of the Niger expeditions, and the mortality in ships and forts on the coast of Africa, are also well known, and have been well described by Boyle, Mc William, Tulloch, and Balfour, in the valuable army and navy returns, and in other official reports.

Plague.—Like cholera, yellow fever, and remittent fever, the glandular plague is now generated, and prevails in Lower Egypt on alluvial ground; and it has a limited range of elevation. It is endemic in the Delta of the Nile, and periodically decimates the population of Cairo and Alexandria. It ascends the Nile, but never, says the reporter of the French Commission, passes the first cataract. It is unknown in Arabia, Nubia, Sennaar, Abyssinia,—the former hot

* Histoire Médicale de la fièvre jaune observée en Espagne et particulièrement en Catalogne dans l'année 1821, par Bally, François, Pariset, pp. 540, 542-44.

† Diseases incidental to Europeans in Hot Climates, by James Lind, M.D., 4th edition, 1788, pp. 200-5, 209, 210-16.

‡ Dr. Ferguson on the Locale of the Yellow Fever, in Johnson and Martin on Tropical Climates, pp. 493-95.

countries, the latter temperate, mountainous, inclining, free from marshes. Arabia, traversed by pilgrims from every part of the Mahomedan world, escaped unscathed in the great plagues of 1825 and 1835, which ravaged a part of Lower Egypt; and Arabia has, from time immemorial, been plagueless. The statement of the Commission is substantially true; but it would be more correct to state that the plague grows gradually less fatal up the Nile, and that it is less frequent and destructive in Upper than in Lower Egypt—in the high lands and in the desert than on the low lands on the shores of the Mediterranean. The plague of 1835 penetrated Said, Upper Egypt, and in the city of Siout destroyed more than 13,000 people.*

The plague is most fatal in the parts of Lower Egypt near the Nile and the great canals. Almost all the villages on the banks of the Nile, on the road to Fayoum, were attacked in the epidemic of 1841; travellers and merchandize arrived there every day from the infected parts, and two of the travellers were attacked in Fayoum, but the population of the province escaped. Fayoum offers a striking contrast to Damietta, where the plague is most destructive. Fayoum (says Dr. Rossi) is raised above the level of the sea, and surrounded by the Desert of Libya, hot, but dry, without marshes; the cemeteries are at a distance from the habitations of the people; the water, without being delicious, may be drunk without inconvenience, on account of the nitre which it holds in solution. Damietta, at the mouth of the Nile, touches the sea; it is surrounded by fresh and salt water marshes; the air is hot and humid; the cemeteries are in the heart of the city; the fresh is mixed with salt water, or soiled by excremential products and animal and vegetable matters in putrefaction. While Suez, a low port, surrounded by stagnant water, was attacked in 1835, Cosseir, built on rocks, and surrounded by arid mountains, escaped, although it obtained its provision from Keneh, where the plague broke out nearly as soon as at Cairo. Désgenettes and Clot Bey agree, that while Cairo itself is ravaged by plague, the citadel on high ground is invariably spared. Cairo, containing now about 200,000 inhabitants, is in a sandy plain at the foot of a mountain, "which, by keeping off the winds that would refresh the air, makes the heat very stifling. Through the midst of it passes the Great Canal," into which the sewers are discharged, over carrion, excreta, and mud. At the yearly overflow of the Nile, its waters filling this canal are distributed over the city, and drunk by the wretched inhabitants. Under the hot sun evaporation goes on; the bed of the canal is exposed; the water, stinking and black, sends up mephitic exhalations, which produce headache and sickness. The water of Lower Egypt is generally bad. Alexandria lies lower than Cairo; with the lakes near, and the infectious shores of its two ports, the stagnant waters in the cisterns and the streets, its numerous villages of small huts constructed of earth, without any opening but the door, raised scarcely three feet from the ground, and sheltering every night numberless families of sailors and dockyard labourers: it is the home of the plague. All over the Delta, the poor Egyptian constructs his house, or rather den, of mud; it is

* Rapport à l'Académie Royale de Médicine sur la Peste et les Quarantaines, fait au nom d'une Commission, par M. Le Dr. Prus, Accompagné de Pièces et Documens, et suivi de la Discussion dans le sein de l'Académie, 1846.

low, dark, damp, and filthy. The full grave of the family is often under the floor. The clothing and food of the fellah is of the lowest description; he is subject to the most debasing oppression.

Constantinople is another centre of the plague, and the circumstances in which it springs up are not very different. The most fatal quarters lie along the port, or in the dirty wretched villages on the European shore of the Bosphorus. The plagues of 1831 and 1834 first appeared in San Dimitri, a village separated from the Pera by a small stream, polluted by the impurities of the places on its margin. A village on mount Alem Dagh, 500 metres above the level of the sea, always enjoys immunity, while the plague is raging below; to this place of refuge the inhabitants of the capital resort. The plague reaches a village lower down the Alem Dagh.

The plague still ravages periodically the population in the lower part of the basin of the Danube.

Syria has four regions: the first, a warm, moist valley, lying along the coast; the second, hilly and rough, colder and healthier; the third, dry and hot, facing the east; the fourth, the depressed valley of the Jordan. The plague is endemic (says Larrey) on the coast of Syria. It committed, in the epidemic which he observed, great ravages in Gaza, Jaffa, St. Jean-d'Acre, and did not spare the Arabs of the Desert in the vicinity of the sea. It was scarcely felt in the villages of the mountains of Nablous and Canaan, but reigned in low marshy spots and places on the coast. The epidemic usually breaks out first in Antioch, Tripoli, Beyrout, Tyre, and Jaffa, whence it spreads to Jerusalem, Nazareth, and other higher towns or villages in the interior, with a diminishing mortality. The plague appears also on the Euphrates and the Tigris. In 1831, it broke out in Bagdad with terrible violence, destroyed half of the population, and left whole streets dispeopled. Bouchir and Bassora, above the Delta, on the Persian Gulf, suffered severely. Erzeroum, near the source of the Euphrates, high among the mountains of Armenia, is held by Dr. Prus to be one of the endemic sources of the oriental plague. This city is quite in an exceptional state. The documents show that there plague is periodically epidemic.

Venice and Marseilles are, after Constantinople, the cities that have last and most severely suffered from plague. The lazaretto was first established in Venice (1403), and is still maintained with much rigour in Marseilles. Venice is low on the lagoons, and is traversed by canals, which have all the offensive qualities of open sewers. Marseilles lies near a great marsh, and is surrounded by hills.

It will be recollected that the Black Death of the fourteenth century first broke out in Southampton, and was, like the plagues of the seventeenth century, excessively fatal in London. This large undrained city and frequented port, inundated with impurities, in the sixteenth and seventeenth centuries was infested by plague.

Salubrity of High Places.

The four great pestilential diseases—cholera, yellow fever, remittent fever, and plague—have this property in common; that they begin and are most fatal on low ground; that their fatality diminishes in ascending the rivers, and is inconsiderable around the river-sources,

except under such peculiar circumstances as are met with at Erzeroum, where the features of a marshy sea-side city are seen at the foot of the mountain-chain of Ararat. Safety is found in flight to the hills and to the desert, or in the removal of ships from infected ports to the open sea. Large masses of men—armies, pilgrims, or sailors in foul ships—often carry the epidemic with them to unhealthy places.

The people living on land of a certain elevation above the plains are not only safe from the attacks of cholera, remittent fever, yellow fever, and plague, but they are in a remarkable degree exempt from other maladies. Their functions are healthy, and their faculties are energetically developed. They present the finest types of the human race. This is evident not only in Cashmere, Georgia, and Circassia, but in all the hill-tribes of India. The miserable natives of the Sunderbunds are below them in all the characteristic attributes of man. The Arabs and Abyssinians too, on the elevated lands of the desert, and on the sides of the mountains from which the Nile descends, present a striking superiority over the people of Lower Egypt; their fiery life, love of liberty, and warlike genius, place them immeasurably above the Fellahs. And it is not the air of the sea that deteriorates the race, for the sea as it restores health also sustains a seafaring people; and islanders generally, whether in the Pacific, the Mediterranean, or the Atlantic, are above the standard type of the people on low rivers, and on the low coasts of continents. In Venice and Holland the sea appears for a long time to have counteracted the degrading influences of low alluvial lands on fine original races.

The people bred on marshy coasts and low river margins, where pestilence is generated, live sordidly, without liberty, without poetry, without virtue, without science. They neither invent nor practise the arts; they possess neither hospitals, nor castles, nor habitations fit to dwell in; neither farms, freeholds, nor workshops. They are conquered and oppressed by successive tribes of the stronger races, and appear to be incapable of any form of society except that in which they are slaves. Strangers no sooner set foot or attempt to settle on the soil than the endemic terror attacks them as if to bid them Begone! and if they remain, their institutions, palaces, and monuments, fall into ruins, as the generations degenerate.

The ancients were well aware of the salubrity of islands and of the high lands; on which the chief temples of Æsculapius (Ἀσκληπίεια) were erected. The temples of Cos and Delos were on islands. The temple of Las was on the summit of Mount Ilium near the Gulf of Laconia; at a short distance flowed the pure and salutary waters of the Smenus. The temple of Megalopolis in Arcadia was on the eastern brow of the mountain in a sacred grove; for the temples were sometimes sheltered from malaria by trees, and sometimes surrounded by gardens and consecrated ground on which no building could be erected. The temple of Cyllene, in Elis, was near the sea; but it was on Cape Hyrminius. Epidaurus, also on the sea-coast, was surrounded by wood-crowned hills. The temples of Hygeia at Ægium, of Æsculapius at Corona near the Gulf of Messena, and at Pergamus, were near springs of pure water, or the sources of streams. The Greek temples of health were away from the cities, isolated, near pure waters, on sweet, elevated places. Hippocrates has sketched, with

the hand of a master, the effects of high and low land, of good and bad water, on the diseases, energies, character, and intellect of men.

The site of ancient Rome, on hills of nearly the same elevation as the high parts of London, was as happily chosen to secure the health as the defence of the Roman people. The *Campagna* extends from the Tiber southward along the coast for 60 miles, and inland as far as the first slopes of the Apennines. In the vicinity of the coast the land is low and swampy, but the remainder of the country—the great nursery of the Roman people—is a vast expanse of table land seldom less than 100 feet above the level of the sea, and for the most part perfectly dry. In the midst of the plain the isolated mass of the Alban hills "divides the Campagna Proper from the deadly level of the Pontine marshes." About 18 miles from the mouth of the Tiber, the stream sweeps round an alluvial meadow containing upwards of 300 English acres. This is the Campus Martius, from which a steep bank rises abruptly and then slopes gradually into the table land, which forms the general surface of the country beyond. The projecting bluffs of the bank, separated from each other and from the main ridge by deep hollows, stand as small isolated hills with steep rocky escarpments, and are the Capitoline, Palatine, and Aventine hills; the Cœlian lies south-east of the Palatine. Another ridge throws out the Esquiline, Viminal, and Quirinal. The Janiculum and the Vatican noted for its insalubrity, are on the right bank of the Tiber. The Insula Tiberina is in the centre of the river, against the base of the Capitoline. The Tiber at Rome is 33 feet above the sea-level; the summits of the hills range from 117 feet to 154 feet above the ordinary level of the Tiber. The Saburra, in the hollow between the Esquiline and the Quirinal, was one of the most busy and thickly-peopled quarters of the city, but the public buildings and the habitations of the Roman people in the most glorious period of their history, were on the seven hills. The site of the city, as well as the great Aqueducts and Cloaca Maxima, evince an exquisite perception of the conditions on which warlike tribes might retain martial vigour in an Eternal City. *Non sine causa, Dii hominesque hunc Urbi condendæ locum elegerunt,* SALUBERRIMOS COLLES, *flumen opportunum, quo ex mediterraneis locis fruges devehantur, quo maritimi commeatus accipiantur: mare vicinum ad commoditates, nec expositum nimia propinquitate ad pericula classium externarum: regionum Italiæ medium ad incrementum Urbis natum unicè locum.** Posted upon the hills, they, in the infancy of the state, subjugated the earth beneath by vast subterranean drains; and gradually brought distant springs underground and in aqueducts to supply the citizens with pure water.

The chief Roman encampments of which traces remain in England, were on the Malvern Hills, the Cotswold Hills, and other high spots, which, even when the country was undrained, must have been healthy. Roman London was on a hill; the Westminster of the monks in a swamp, as Peterborough and other monasteries were, probably for

* Oration of F. Camillus, in which he dissuades the people from abandoning the city after it was burnt by the Gauls.—Livy, Dec. I., lib. v., cap. 30.—Vitruvius thus closes an eulogium of the site of the city:—"Ita Divina Mens civitatem populi Romani, egregiâ temperatâque regione collocavit, uti orbis terrarum imperio potiretur."

protection from the Northmen and marauders. Many monasteries and priories were on fine sites.

The military posts most easily defended in ancient times against an enemy are the best defences against epidemics; and with the regularity of a general law, the first cities, castles, and temples, were on high places.

The modern Romans, remarkably enough, inhabit the low alluvial ground (Campus Martius) which the Tiber embraces as the Thames does Southwark, and the low ground on the opposite bank of the river. The Quirinal and a part of the Capitoline are still covered with habitations; the Palatine, the Esquiline, the Cœlian, and the Aventine, are deserted; the bells of conventual buildings alone disturb the silence reigning in the waste among the crumbling ruins and vineyards.* Lancisi has traced the history of the great city through all its vicissitudes, until it was deserted by the Roman pontiffs, and its population had dwindled down to 33,000; but he leaves it uncertain when the people descended from the hills.† Leo X., who filled the city with strangers, suffered his new colonists to build on the Campus Martius; and the other low grounds were occupied although the houses were infested by the inundations of the Tiber. "Tiberinis alluvionibus incolas humilium Urbis regionum sæpe diuturnis, sæpe etiam sævioribus ægritudinibus laborasse, luculentius ipsa plebis clades, et luctus testatur, quam ut ab auctoritate, vel ratione testimonia repetamus," says Lancisi, writing in 1710. Cholera, in four months—July, August, September, and October, 1837—destroyed 5419 of these fallen people, who did not exceed 156,000 in number.

As the power of the Egyptians descended from the Thebaid to Memphis, from Memphis to Sais, they gradually degenerated; notwithstanding the elevation of their towns above the high waters of the Nile, their hygienic laws, and the hydrographical and other great sanatory arrangements which made the country renowned, justly or unjustly, for its salubrity, in the days of Herodotus. The poison of the Delta, in every time of weakness and successful invasion, gradually gained the ascendency; and as the cities declined, the canals and the embalmments of the dead were neglected,—the plague gained ground. The people, subjugated by Persians, Greeks, Romans, Turks, Mamelukes, became what they have been for centuries, and what they are in the present day. Every race that settled in the Delta degenerated, and was only sustained by immigration. So likewise the populations on the sites of all the city-states of antiquity on the coast of Syria, Asia Minor, Africa, Italy, seated like the people of Rome on low ground, under the ruin-clad hills of their ancestors, within reach of

* Rome Illustrated, H. Noel Humphreys, pp. 23-24.

† See in Roman Antiquities, by W. Ramsay, 1851, an admirable digest of the researches of Bunsen and others in their Beschreibung der Rom. See also the fine piece of Medical Topography, by Lancisi, Dissertatio de nativis, deque adventitiis Romani cœli qualitatibus.—Opera, 1718. Niebuhr says that "Rome has now no right to its name; it is an entirely foreign vegetation that has grown upon a part of the old soil, as insignificant and thoroughly modern in its style as possible, without nationality and without history. * * * Science is utterly extinct here. * * * The people are apathetic; and truly, if ever they were remarkable in any way for personal appearance, they must have strangely altered."—*Life and Letters of Niebhur, by Bunsen, Brandis, and Loebell.*

fever and plague—are enervated and debased apparently beyond redemption. The history of the nations on the Mediterranean, on the plains of the Euphrates and Tigris, the deltas of the Indus and the Ganges, and the rivers of China, exhibits this great fact—the gradual descent of races from the high lands, their establishment on the coasts in cities sustained and refreshed for a season by immigration from the interior; their degradation in successive generations under the influence of the unhealthy earth, and their final ruin, effacement, or subjugation by new races of conquerors. The causes that destroy individual men, lay cities waste which in their nature are immortal, and silently undermine eternal empires.

It is unlikely that man should be left *exclusively* to the guidance either of calculation or experience in matters of so much importance as the character, vigour, health, and existence of race. An instinctive sense draws him to the healthy places of the earth, and makes the lands in which his race dies and is degraded, repulsive. In dank marshes surrounded by stagnant waters, and in hollow places of the earth covered with reptiles, we feel oppressed; on the plain, where the breezes sweep over the herbage, the mind as well as the body is at ease; and as we ascend the uplands of England, pass large flourishing trees by fresh waters, or mounting still higher, see the living springs burst from the earth; the hills covered with heather, the woods, fields, and plains stretched out in endless undulations below—the chest expands in the elastic air, and the soul seems to drink in deeper draughts of Life. On the high lands men feel the loftiest emotions. Every tradition places their origin there. The first nations worshipped there. High on the Indian Caucasus, on Olympus, and on other lofty mountains, the Indians and Greeks imagined the abodes of their highest gods; while they peopled the low underground regions, the grave-land of mortality, with infernal deities. These myths have a deep signification. Man feels his immortality in the hills.

The effect of high and low land is as real, but not so obvious, in England as it is in the tropics. The Saxons and the Northmen came to these islands in ships, and their descendants retain an inextinguishable passion for the sea. In summer and in seasons of sickness English families fly to the sea-side; in the winter they resort to warm, sheltered spots in the south of England or on the western coast. The boatmen, fishermen, and seamen are generally a hardy, adventurous race. The coast is in many parts precipitous, and the high districts are healthy. In the low, marshy tracts along the southern and eastern coast and the estuaries of rivers, the health of the people is depressed. Around the Wash the mortality approaches that of the Tuscan Maremma. The Atlantic has, however, some sanatory as well as commercial advantages over the tideless Mediterranean.

The extensive observations which have been collected under the Registration Act, and the calculations in the report, show indisputably that the elevation of the soil exercises as decided an influence on the English race as it does on the native races of other climates and soils.

The great, striking, practical fact which the Inquiry into the Mortality of Cholera in England has elicited, is the influence of slight degrees of elevation. In the vast population of London, it is rendered evident. In the part of the parish of Lambeth near the level of the

Thames, the cholera, in 10,000 inhabitants, destroyed 163; at Kennington, 8 feet high, 90; at Brixton, 56 feet high, 55; and, finally, in Norwood, the highest sub-district of the parish, where the inhabitants are at least 128 feet above the river, only 5 in 10,000, and this was not accidental. Elevation within these moderate limits operated with the regularity of a general law; and the influence of elevation has been felt all over the kingdom. Everywhere the low cities have suffered.

Besides the trial which the population has gone through in the epidemic of the world, there is another test of health—the longevity of the inhabitants of various places, and the rate of mortality experienced from ordinary causes, and home epidemics. The hundred diseases which afflict, derange, and destroy the frame of man, acknowledge various causes; camps and cities suffer certainly on low ground from one train of diseases; in high localities, starvation, density, impurities, generate other maladies which are not less certainly fatal. The mortality of a dense, dirty city, on a hill, seated on cesspools, and ill supplied with water, may be higher than the mortality of an open town on the margin of low marshes; but the other conditions being equal, the mortality in the long run will be greatest in the low situation. The causes which make cholera, plague, remittent fever, yellow fever, periodically fatal, are always in operation, and furnish their daily quota to the hospital, the sick chamber, and the grave. Accordingly we find, on reverting to the Tables of Mortality, for the seven years 1838-44, that, as a general rule, the mortality declines as we ascend the rivers. The majority of the healthy districts are at a certain elevation above the sea.

Such is the variety of the soil of England, that, tested by the rates of mortality—the children reared out of a given number born—the longevity of the inhabitants—the freedom from common epidemics—or the immunity from cholera, healthy districts are found in nearly every county. Large tracts of country are, however, so much healthier than the rest, that they may be justly called Salubrious Fields; and it is remarkable that here the finest races of animals are bred. The north districts of Northumberland around the beautiful Cheviot hills, covered with grasses, ferns, wild thyme, extending from the region of the heaths to the rich cultivated land at their bases, touching each other, or intersected by narrow valleys; the districts extending from the Tees over the North and East Ridings of York to Leicestershire, Herefordshire, and parts of Shropshire; some of the districts of Gloucestershire about the Cotswold hills; parts of Wales; North Devon, including Dartmoor and Exmoor; the Surrey and Sussex hills, with the Southdowns; have given names to the best breeds of sheep, fowls, cattle, and horses, in the kingdom. The Old Lincoln and the Romney Marsh breeds of sheep attained a large size in the rich pastures of the drained fens; but they have either altogether given way to the other breeds, or been modified by the blood of other races. The immense dray-horse of London is bred in the fens of Lincolnshire and Cambridgeshire; he is massive and powerful, but is slow, without mettle, without action; he does not step out, and is unanimated by the fire of the better breeds. The mountain races of horses, cattle, and sheep, are small, for the herbage is scanty, but they are hardy, energetic, and intelligent; their bulk augments on richer pastures, and appears, with

the loss of some of the higher qualities, to attain its maximum in the drained fen land. The horse, which, in Arabia, Barbary, Persia, and England, attains so high a development, is said to degenerate on the low coasts of Africa and Asia; but we have no means of tracing the certain degeneration on unhealthy soils either of these animals, of oxen, or of sheep, in England. All that is well known is the improvement in healthy districts, and the fatal effects of marshes and of the unhealthy atmosphere of towns on the higher classes of animals.*

The dry and most inland are not always the healthiest regions of the country. The salubrious fields are sometimes watered by running streams, and diversified by lakes; the dew is abundant; they are often veiled, not by infectious fogs, but by mists drawn from the sky as it breathes over them; the mountains rise over; the ocean rolls at the distance below them, as on the coast of Sussex, North Devon, the western region of Wales, extending under Snowdon and Cader Idris in a vast amphitheatre round Cardigan Bay; the lake-land and moors of the North, rising between the Irish Sea and the German Ocean. The land is sometimes heathy, but may be covered by the sweetest herbage, and bees feeding on the flowers; the cereal grains, the hop, the timber, are often of the finest quality; the animals are healthy, the native breeds are vigorous; and those fine varieties are produced at intervals, which men of the genius of Bakewell, Ellman, Tomkins, Colling, and O'Kelly, make the permanent stock of the country. Industry and the army receive their best recruits from the population, while they get their worst from the people of the low parts of sickly towns. Agriculture has reclaimed many unhealthy districts on the plains, so that a considerable extent of the cultivated land is now in a state of comparative salubrity; and vast systems of drainage have subdued the noxious fens, although carried out less efficiently than is desirable, and interfered with by milldams on the rivers, descending like the Nene, from the inland highlands.

The population is never uniformly distributed over a country. The soil is washed down into the valleys, and is followed by a fertile vegetation, which supplies animals, and finally man, with food. The places of resort for the performance of public acts, and for the interchange of commodities, have usually a central situation, easily accessible along level roads, where water is abundant; accordingly, almost all inland towns of any magnitude are on rivers; and as the commerce by sea increases, the population is brought down to the coast, or to the point up to which the river is navigable by large vessels. The seaport towns are frequently near the deltas of rivers on low coasts; and higher up the rivers, a large part of the people are often so insensible, that they sink or settle on the lowest ground, to avoid the labour and expense of living on the better sites which are in the neighbourhood. Canals have also had a tendency to draw the population down to low towns on their banks.

The population of England increased slowly in the seventeenth and in the first half of the eighteenth century. The towns and seaports

* The Domesticated Animals of the British Islands, by David Low, Esq., Prof. of Agriculture, Univ. Edinburgh, 1845.—Journal of the Royal Agricultural Society of England, vol. ix.,—Prize Essay On Farm Horses, by W. C. Spooner, p. 249; and Prize Essay On Cattle, by Hall W. Keary, p. 425.

were not then places of great magnitude, and their population was sustained by immigrants from the country—the high nursing-grounds of the kingdom. "The supply of London alone," says Davenant, from King's observations, "takes up above *half the neat increase* of the kingdom." The burials greatly exceeded the christenings in London, and it is probable that of the whole population of England only an insignificant portion was born in the low parts of towns and ports. The great increase of the town population in the present century is chiefly due to immigration, which has not only sustained the old proportion of the population, but has introduced a great excess of healthy life from the high inlands. The result is, that a large proportion of the population of England is now in the low seaports, manufacturing towns, and cities. The population in 117 districts, comprising the chief towns, was 6,612,958 in 1841, and 7,795,882 in 1851; the population in 506 districts, comprising chiefly small towns and country parishes, was 9,301,190 in 1841, and 10,126,886 in 1851. A large proportion of the next generation of Englishmen will consequently be born in town districts, some of which are high and healthy, while others, low, insalubrious, subject to inundations and to the incursions of cholera, present many of the circumstances in which a degradation of race is inevitable. So, while the drainage of the marshes, the cultivation of the soil, the sanatory measures in the old towns, and the diffusion of education have tended to promote the amelioration of the English race; the descent of the population to the low places, which have in the last ten years increased twice as fast (2 per cent. per annum) as the healthy parts—the sudden growth of large mining and manufacturing places left undrained, ill-cleansed—the liberation of multiplying vagabonds and criminals, who were in the old times transported, cruelly destroyed by jail-fever, or hanged, have had a tendency to increase the proportion of deteriorated organizations. Idiots and lunatics, who are no longer plunged in cells for a short life, and other persons labouring under hereditary diseases, are also increasing, probably from a similar cause. In addition to the inhabitants of the old towns, which have always been fatal, several millions of people are now in the seaports, in South Wales, in Staffordshire, in the mining districts of the north, in the towns of the West Riding of Yorkshire, and in the dense districts of Lancashire, where the health of parents is depressed, and the circumstances are often so prejudicial to their offspring, that, of the coming generation, five instead of two of every ten born are destroyed in the first five years of life, and the survivors, with a few happy exceptions, are left with shattered, feeble, febrile, and disorganized frames. The countenance of the children is painful in these districts, and in all the places where cholera has raged, presents the most striking contrast to the healthy hardy aspect of the children in salubrious fields. Their degeneration is as inevitable as the degeneration of horses, oxen, sheep, in circumstances equally unfavourable.

All analogy, however, proves that no extensive or permanent degeneration of a race can be accomplished in less than two or three generations. The great change is as slow and insidious as it is certain. It is rarely perceived by its victims; who remain rooted and benumbed on the spot unless they and the community are aroused by sudden and

terrible catastrophes. That angel which, it would seem, it has pleased the Almighty Creator and Preserver of Mankind to charge with this dread mission is the Pestilence. Wherever the human race, yielding to ignorance, indolence, or accident, is in such a situation as to be liable to lose its strength, courage, liberty, wisdom, lofty emotions—the plague, the fever, or the cholera comes; not committing havoc perpetually, but turning men to destruction, and then suddenly ceasing, that they may consider. As the lost father speaks to the family, and the slight epidemic to the city, so the pestilence speaks to nations, in order that greater calamities than the untimely death of the population may be averted. For to a nation of good and noble men Death, is a less evil than Degradation of Race.

The acknowledged greatness of England has been variously accounted for; and it would be illogical to refer it to any single circumstance. Among its primary causes are, however, unquestionably to be classed the character and quality of the race of men—derived in happy proportions from a Scandinavian, Celtic, and Saxon stock—and bred mostly in pure air on the hills and grounds of moderate height supplied with running water, or on the fertile plains and valleys of an island, pregnant with mineral wealth and well placed for commerce on the frontier of the old and in the way to the new world. Englishmen have derived weapons in industry and war from the coal and iron mines; but their strength and courage, in modern as in ancient days, came from other sources. Their skill, industry, science, religion, justice, freedom, sense of duty, love of country, and goodwill for other people, have all contributed to their success: they were bestowed on them by nature, circulate in their blood, and beat in their hearts. No race of men, living in maremmas, marshes, deltas, low sea-coasts, low river-sides, could have acquired or wielded the power of this empire.

In the ten years 1841–50 more than 744,809 children were born in seventeen port districts, six inland districts, and eleven districts of London on the south side of the Thames, where cholera destroyed 26,258 lives in 1849; and it is probable that more than one-fourth part of the next generation of the English race will be born and bred in insalubrious places, which must in the long run induce degeneracy. The proportion of such births is rapidly increasing. Is it not time, then, to take heed? Are we not on the verge of a great calamity? This question is more than a question of life and death for the people. If degeneration should extend, and large numbers of the English race be divested of its noblest characteristics, their reclamation would be an arduous if not impracticable undertaking. For while nature in time supplies a loss of numbers, it is difficult by the most consummate art in favourable circumstances, to retrieve the loss of generous qualities. How few genuine instances are there of the regeneration of a fallen man, class, or nation?

Great Britain enjoys undoubtedly many advantages over the Babylons of the ancient world, and the decayed maritime city-states. Extensive habitable highlands and fertile fields must always be the birth-place of a majority of its children. Its population and power can never be circumscribed within a single city or within the low ports of an alluvial coast; and it is surrounded by the refreshing sea. The vast populations which have recently settled in bad localities may almost

invariably find in the neighbourhood, sites at elevations which, in these latitudes, cholera does not climb. With wealth, industry, and science at command, it is still possible to drain, and supply with pure water and a purer air, districts as low as Southwark, Westminster, Liverpool, and Hull; thus disarming them of much of their fatal power.

But malaria begets apathy. The unhappy inhabitants of unhealthy places disregarded statistical calculations—the counsels of their medical men—the analogies of nature, and the results of experience. The wan looks of their children, and the multitudinous Voices of their Dead did not move them. The Community was also in the wrong! for the laws left them without warning, punishment, or effectual assistance. Then Cholera came; and in two heavy visitations carried off more victims than the United Kingdom has lost in many wars. It may, if nothing is done, after a season return, for it still reigns in India. But let these human sacrifices suffice. The great Sanatory Reforms which will shield the country from pestilence, while they save the lives of thousands, will prevent the degradation of successive generations; and promote the amelioration and perfection of the human race.

Conclusion.

For the practical applications of the results of this inquiry I must refer to the Report: I shall here only insert the following:—

Persons who have the means may, by an early removal from an *infected district*, always *find safety* in such salubrious districts as the tables show had deaths neither from diarrhœa nor cholera in the year 1849. The sportsman on the moors, and the people near the river-sources of the country, in the first week of September, when the cholera killed 2,157 persons in London and 4,991 persons in other places, were in those high situations in no danger whatever of an attack. Many people left London, and went, as usual, to the sea-side. This was an error: sometimes the disease within them was developed on the low land; sometimes they were attacked, not only in the towns, but in the villages on the coast.

Strangers who can avoid it should not visit a town in an epidemic. They appear to be peculiarly liable to an attack. Persons whose duties confine them to an infected town will find that removal from districts in which the epidemic is raging to high, clean districts of the same town, insures a great degree of immunity.

In outbreaks, where it may be necessary to move large numbers of people, they should be sent to high, dry ground, where good water can be procured. Clean *ships* generally find safety by going out to sea; *armies*, by removing from the camp in which they are attacked, and encamping on high ground.

High places are also generally safe asylums from plague, yellow fever, remittent fever, and ague. It is necessary in the epidemics, as it is in cholera, to keep away from marshes and rivers in the lower parts of their course, and to obtain water, if possible, from unpolluted springs.

Armies suffer more from cholera *on march*, or immediately afterwards, than they do in station. Many instances are adduced from Indian experience by Mr. Orton; and the fact is placed beyond doubt

by the statistical analyses of Assistant-Surgeon Balfour.* The encampments and marches of the Indian armies lie often by rivers, on low grounds. Cholera found the Marquess of Hastings near the margin of the Sinde, in Bundlekund, on November 7, 1817, and destroyed in one week 764 fighting men, and some thousands of the camp-followers of the grand army; it ceased after the 19th, when he crossed the clear stream of the Betwah, and encamped upon its high and dry banks at Erich.† Colonel Pearse had been marching, in 1781, on the sea-coast six days through "sand and sea water," when his 5,000 men were "attacked with inconceivable fury," and the road was strewed with the dead in the first well-recorded epidemic of Asiatic cholera.‡

If an army had been marched through or encamped on the low streets of Southwark south of the Thames, in August 1849, it would no doubt have suffered severely from cholera; while it might have been moved down the high roads north or south of London with impunity. The danger from pestilence of every kind is diminished

* See some good observations on the movement of troops, in the "Statistics of Cholera," by Assistant-Surgeon Edward Balfour. He shows, that of the native soldiers of the Madras army, 32 died of cholera in cantonment, 86 when marching, to an average strength of 10,000. The attacks were respectively 85 and 200 in 10,000. Dr. Lorimer's Reports show that the troops were more frequently attacked on long than on short marches: thus, the troops in 219 marches of 20—40 days were attacked 39 times; while in 14 marches of 100—120 days they were attacked 7 times. If we take 100 marches as the basis, they were attacked 18 times in about 30 days, in the one case; while in the other case they were attacked 50 times in about 110 days, that is, at the rate of 14 times in 30 days. This is no proof that *fatigue* increases the liability to attack; it only proves that, on the long marches, the men are exposed a longer time to the causes of the disease.

Mr. Balfour would assuredly expect more men to be wounded in a battle of three days, than in a battle of one day's duration.

It would be a great advantage if soldiers in the field could sleep on raised camp beds.

† Jameson on Cholera, pp. 15, 16.

‡ Algiers is as fatal to the French as India is to the English soldier; for the annual mortality was, as M. Boudin has shown, in his valuable papers on Algeria, and "Statisque de l'Armée," 7·58 per cent. in 1837-1846, or four times as great as the mortality (1·86 per cent. in 1842-1846) in France. The mortality was as low as 4·5 in 1838, and as high as 14·1 per cent. in 1840: it varied at the different stations in 1845, and was 3·6 in Algiers, 3·7 in Mostaganem, 4·2 in Oran, 5·5 in Philippeville, 6·6 in Blidah, and 14·1 in El-Arouch. The following order, addressed by Marshal Bugeaud, in 1847, to his Generals, shows that the French had become alive to the danger of encamping on low grounds:—

"J'ai remarqué que MM. les commandants de colonne choisissent leur campement au bord des cours d'eau, dans l'intention louable sans doute d'éviter à leur troupes des corvées pour aller à l'eau. Mais l'experience a démontré que cette manière de camper donne un nombre considérable de malades.—*Une seule nuit passée dans un bas-fond suffit quelquefois pour donner une centaine de malades sur en effectif de* 3000 *hommes.* On comprend avec quelle rapidité une colonne serait fondue si cette manière de camper se renouvelait.

"Je recommande donc de la manière la plus formelle à tous les commandants de colonne de choisir toujours leur campements sur les hauteurs et des coteaux, toutes les fois que le terrain le permettra.—Pourvu que l'on puisse bien se garder dans la position que l'on choisit, peu importe la forme donnée au camp si l'on est dans un endroit salubre. Il vaut infiniment mieux imposer quelques corvées aux hommes pour aller à l'eau et pour mener les chevaux et mulets à l'abreuvoir. La santé des soldats en souffrira beaucoup moins que de camper dans un endroit soumis à des influences morbides."

by keeping troops on high ground: they often lose their strength, and perhaps some of their courage as well as health, on low ground near rivers and marshes; which, judging by the event, notwithstanding some advantages, make as bad lines of defence for armies as they do places of refuge for feeble nations, who only survive and permanently resist in the hills.

The Walcheren expedition is an illustration of the fate of military operations on the deltas of great rivers, or on the low islands at their mouths.*

The Peninsular war offers an example of a different kind: our troops suffered severely on the Guadiana: but the earth fought for the English on the high lines of Torres Vedras; and against Masséna in the humid plains below, until he retired to Santarem, and finally retreated with the loss of 40,000 veterans. The French army remained starving for five winter months, in the midst of marshes; and the disastrous incidents of the retreat showed that they there lost many of their finest qualities.† They began their retreat with 10,000 sick.

Travellers in unexplored countries should not rest on low, swampy spots; they have the best chance of preserving their health and the health of their horses and cattle by passing the nights on high ground, in the neighbourhood of springs, or near small rapid rivers. The two Landers, after Captain Clapperton, by adopting this course, landing at Badagry, and, as their map and journal show, keeping on the high grounds, arrived at Yaouri, and both succeeded in *descending* the Niger alive.‡ An attentive examination of journals of travels establishes the value of this rule.

Earth. If it is important that travellers, armies, and all moving bodies of men should avoid damp, low grounds, it is evidently of still greater importance that the habitations of a people should be raised on dry, drained land of a certain elevation, washed by rains, and ventilated by the breezes of heaven. The sites of many English towns are unexceptionable; they lie beautifully on the slopes of hills against the sun; the spires of their churches stand out against the sky. The sites of other cities, and of parts of nearly all, are, as we have seen, singularly bad, and should never have been selected for building. Sites of towns are as much a matter of public concern as lines of road, canals, or railways; and legislation could not be more advantageously employed than in directing and facilitating selection. The present law of settlement, and the mixed, complicated, uncertain tenure of land,

* "Select Dissertations," by Sir Gilbert Blane, Dis. III. He notices that those who slept in the upper stories of houses were less liable to the Walcheren fever, and had it in a milder form, than those who slept on the ground floors. Dr. Ferguson remarked in St. Domingo, that two-thirds more men were taken ill on the ground floors than on the upper stories. The celebrated Dr. Cullen observed the same in the sickness which he witnessed in Porto Bello in the year 1740. p. 91.

† Dispatches of the Duke of Wellington, vol. vii., pp. 256, 270, 448. "I never saw an army so healthy as this [the English]. Indeed I may say that we have scarcely any sick, excepting in the Walcheren regiments."—16 *Feb.*, 1811. "The enemy's loss in this expedition to Portugal is immense; I should think not less than 45,000 men, including the sick and wounded; and I think that, including the 9th corps, they may have 40,000 on this frontier."—*9th April*, 1811.

Napier, Peninsular War. vol. iii., Book XII.

Alison, History of Europe, c. 63.

‡ Lander's Niger Expedition.

interfere seriously with the choice of ground, and exclude the people from many of the best sites in the immediate neighbourhood of the places in which they dwell. This evil can be remedied. The railways now offer extraordinary facilities for distributing the population over a wider area; and as the canals and navigable rivers have drawn the population down, the roads, stations, and warehouses, kept as high as is practicable, may counteract this tendency, raise people to a higher level, and at once facilitate drainage and the application of the sewage to agricultural purposes.

The higher districts of Middlesex, Surrey, and Kent, immediately around London, are as healthy as any in the world; so that a moderate extension of the building-area in the right direction, would be sufficient to secure salubrious sites. The cost of conveyance and carriage would be speedily compensated even to artizans by their increased health and energy; their children would be saved from death, disease, deformity, vice, drunkenness, degradation, the prolific fruits of malaria. They would be susceptible of religious and intellectual culture; which, in their present dwellings, is made difficult for the children of good and worthy workmen.

The houses in England and Wales amounted to 3,117,182 in 1841, and to 3,433,859 in 1851; the increase in the interval was 316,677, in addition to those, which were built to replace decayed and destroyed houses; so that in the towns of England the selection of building-sites is a question constantly open.

In the *Colonies* the choice of sites for new towns is a matter of primary importance. The sites lying most conveniently for commerce are often low and insalubrious; but as low shores are more subject to inundations, earthquakes, pestilences, and the influences that deteriorate the English race, the tempting facilities which they offer should not weigh against the enduring advantages of high healthy lands. Regard must of course be had to defence, commercial convenience, and fertility of soil; but in taking possession of new countries, the proper course would appear to be to ascend the rivers sufficiently high to secure vigour of race, and then gradually to descend towards the deltas, draining and cultivating the land on the way. The rule is the result of all our present investigations; it is quite in conformity with the traditional course of the primæval races. The example of Holland, of America, and of parts of England, shows that low fen and marsh land is habitable; and with efficient drainage, it is probable that, if thinly peopled by a race well fed and naturally hardy, neither disease nor degeneration would go beyond a certain point, quite compatible with a comfortable if not a very spiritual and exalted existence. A moderate elevation in temperate climates is a protection against many evils: as cholera has shown in London.

Climate. Long experience alone can ultimately determine what climates are healthy; and every locality must be ultimately judged by the test of such a calculation as has been applied to the districts of England and Wales. But analogy justifies the inference from experience, in some cases brief and imperfect, that in parts of Canada, the United States, South America, New Zealand, the Isles of the Pacific Ocean, Australia, and Southern Africa, the English race retains the energy, which it invariably loses in two or three genera-

tions on the low tropical lands of the West India Islands, of the West Coast of Africa, and of Southern Asia; where much of the best blood of England has been sacrificed without establishing permanent settlers, making any evident impression on the native population, or producing any lasting fruits. Near the spot which has, for many years, been the centre and the capital of the imperial power in India, the devastating epidemic Cholera was generated, which has twice ravaged these islands, and twice encircled the world. The average mortality of the English troops in India has hitherto exceeded *5 per cent. annually*. The removal of the European population from the low to the high land, railways, vast systems of drainage, and the steady prosecution of the sanatory measures which have been commenced, are required to justify the credit which the Government of India has latterly obtained for enlightenment and beneficence.

W. H. Duncan, Esq., M.D., the Health Officer of Liverpool, was present when the above paper was read, and has kindly placed the following letter at the disposal of the Council:—

My dear Sir,— 15*th May*, 1852.

In compliance with your suggestion, I have examined the question as to the influence of *elevation* on cholera in Liverpool, and the following are the results.

The borough is divided into sixteen municipal wards or districts. In the eight highest districts, having an average elevation of about 100 feet above high-water mark, the mortality from cholera was 90 in 10,000 inhabitants. In the eight lowest districts, with an average elevation of about 35 feet, the mortality was 214 in 10,000.* The higher districts had a population of about 186,000; the lower, about 165,000.

Dividing the districts into *three* groups, having, as nearly as the arrangement admits of, equal amounts of population, the mortality in the highest group was 59 in 10,000; in the middle group, 176 in 10,000; and in the lowest, 211 in 10,000. The average elevation of these groups was respectively about 125, 50, and 30 feet. In the first group, the elevations varied from 110 to 160 feet; in the second, from 44 to 74 feet; in the third, from 20 to 38 feet.

Taking the districts singly where the difference of elevation is only 2 or 3 feet, I find the law is not carried out, being apparently overpowered by disturbing elements which come into operation. But when the districts of approximating elevations are grouped together, and the groups so formed contrasted, the results distinctly point to a relation between the elevation of the soil, and the mortality from cholera.

I myself estimated the elevations from the contour-map of the borough, so that they cannot be depended on as *strictly* accurate. They are as nearly so, however, as I could make them.

I am, dear Sir,
Yours faithfully,

William Farr, Esq. W. H. Duncan.

* By the law in the previous paper, 113 : 48 : : 214 : $x = 91$ = mortality from cholera in the higher districts. The actual mortality observed was 92.—W. F.

MISCELLANEOUS.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

SESSION 1851–2.

Fifth Ordinary Meeting. Monday, 15th March, 1852.

Lieut.-Colonel W. H. Sykes, Vice-President, in the Chair.

The Right Honourable Lord Wodehouse was elected a Member of the Society.

The following Papers were read:—

1. On the Rate of Mortality prevailing in the Medical Profession. By F. G. P. Neison, Esq.
2. On the Mortality in the Bombay Army. By Lieut.-Colonel W. H. Sykes.

Sixth Ordinary Meeting. Monday, 19th, April, 1852.

Lieut.-Colonel W. H. Sykes, Vice-President, in the Chair.

The following Gentlemen were elected Fellows of the Society:—

E. Marmaduke Clarke, Esq.	William L. Howard, Esq.
Walter Ruding Deverell, Esq.	Edwin H. Galsworthy, Esq.

The following Papers were read:—

1. Vital Statistics of Chittagong, Bengal. By Assistant-Surgeon Bedford.
2. Mortality from Cholera in England, 1848-9. By W. Farr, Esq.

Seventh Ordinary Meeting. Monday, 17th May, 1852.

Lieut.-Colonel W. H. Sykes, Vice-President, in the Chair.

Edward Barlow, Esq., was elected a Fellow of the Society.

The adjourned discussion on Mr. Farr's Paper on Cholera in England, 1848-9, was resumed.

THE MARRIAGES, BIRTHS, AND DEATHS,

REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND,

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

THIS return comprises the births and deaths registered by 2,190 registrars in all the districts of England during the Autumn quarter ending December 31st, 1851; and the marriages in more than 12,000 churches or chapels, about 3,228 registered places of worship unconnected with the Established Church, and 623 superintendent registrars' offices, in the quarter that ended September 30th, 1851.

The return of marriages is not complete; but the defects are inconsiderable, and approximative numbers have been supplied from the records of previous years.

The marriages and the births exceed the average numbers; and the deaths are also slightly above the average of the corresponding quarters.

For the whole of the year 1851 the births have greatly exceeded the numbers in any previous year, and the mortality has been lower than it was in any of the 10 years 1841-50, except 1843, 1845, and 1850. The births, deaths, and marriages

show a balance of births over deaths, and an increase of families; which are only observed in a state of prosperity. The tendency at the end of the year to decline towards the average state of things will no doubt attract attention to the great interests and to the public health of the country.

Marriages.—74,310 persons were married in the 3 months ending September 30th. The rapid increase of the marriages in England from 29,221 in the September quarter of 1840 to 37,155 in 1851 is partly due to the increase of the population and partly to the increased disposition to marriage. In the September quarter of 1841 and 1851 out of 100,000 persons, 365 and 409 married; consequently out of the same number of persons, 8 married in 1841 and 9 in 1851.

The number of marriages is less than it was in the previous June quarter, which is usually the case, and slightly less also than it was in the corresponding quarter of 1850. In parts of the country the decrease is not inconsiderable; in others, the marriages of 1851 exceeded those in the corresponding quarter of 1850. Thus in London the marriages in the quarter ending September 1851 were 7,345, or 583 more than in the September quarter of 1850, and 1,548 more than in the quarter of 1847! In Kent, Sussex, and Hampshire the marriages still exceed the average; in Berkshire the excess in inconsiderable. The excess was chiefly in Guildford, Dartford, Tunbridge, Dover, Eastbourne, and Lewes. In Brighton the marriages were 154, which is near the average, but less than in the corresponding quarters of 1849-50. In the South Midland Division, Buckinghamshire, Oxfordshire, Northamptonshire, Bedfordshire, and Cambridgeshire have fewer marriages in the quarter of 1851 than in the corresponding quarter of the previous year. In Essex and Norfolk, Wiltshire, Dorsetshire, and Somersetshire a similar decline took place; in Suffolk and Cornwall the marriages slightly increased. In the South Midland, Eastern, and South-western counties, the number of marriages, though less than in the corresponding quarter of 1850, was not below the average. The same state of things is observed in the West Midland Division; the marriages were less numerous in Herefordshire, Gloucestershire, and Shropshire than they were in the previous year; in Staffordshire and Worcestershire the numbers remained above the average, and there was a considerable increase in Wolverhampton and Stourbridge; in Warwickshire the marriages are more numerous than they were in 1850, and the increase is chiefly in Birmingham and its suburbs. In Leicestershire, Nottinghamshire, and Derbyshire the marriages rapidly increased from 1847 up to 1850, and have now slightly declined. Lincolnshire, which was at the lowest point in 1850, increased in 1851. The marriages in nearly all the districts of Lancashire, including Liverpool and Manchester, declined, but were more numerous than in any previous September quarter except that of 1850. The marriages have progressively declined in the North Riding of Yorkshire since 1848; they still remain above the average in the West Riding. In Keighley, Halifax, Leeds, and Sheffield the number of marriages in the quarter exceeds the number in the corresponding quarter of any previous year since 1847. In Leeds and Sheffield the increase is remarkable. In Hull and Sculcoates, the rate of marriage declined. In the Northern Counties and in Wales the rate of marriage remained above the average, but was rather lower than it was in the September quarter 1850.

The marriage returns of 1850 and 1851 exhibit the excess which since 1750 has been invariably observed when the substantial earnings of the people are above the average; and the experience of a century, during which the prosperity of the country though increasing has been constantly fluctuating, shows that it is prudent to husband the resources of good times against future contingencies. Workmen, if they are wise, will not now squander their savings.

Births.—149,155 births were registered in the last quarter, and 616,251 in the year 1851. These are the greatest numbers ever before registered. The average annual rate of births in the 10 years 1841-50 was 3·261 per cent.; in the year 1851 the rate was 3·428 per cent. To every 100,000 of the population 3,428 children were born in 1851 instead of 3,261; and there was consequently an excess of 167, or of 5 per cent. The excess appears to have been distributed very generally over the whole country.

Increase of Population.—While the births in the last quarter of the year 1851 were 149,155, the deaths were 99,248; leaving an excess of 49,907 in the population. The deaths in the year 1851 were 385,933, the births 616,251; consequently 230,318 at least was the natural increase in England and Wales of a

population amounting to 17,977,000 in the middle of that year, and now exceeding 18 millions of souls.

Emigration still continues; 59,200 people left their homes and the ports of the United Kingdom in the last 92 days of the old year. 52,292 sailed from English ports; namely, 42,680 from Liverpool, 6,252 from London, and 3,360 from Plymouth. 1,524 persons sailed from Glasgow and Greenock; 5,384 from Irish ports. A great proportion of these emigrants from Liverpool were of Irish birth.

The Average Prices of Consols, Wheat, Meat, and Potatoes, also the Average Quantity of Wheat sold and imported Weekly, in the two last Quarters of 1851.

Quarter ending	Average Price of Consols.	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase).		Potatoes (York Regents) per Ton at Waterside Market, Southwark, when the supply of old Potatoes ceased.
			Average Number of Quarters Weekly.		Beef.	Mutton.	
Sept. 30.	96½	40*s.* 7*d.*	74,714	91,040	3*d.*—5*d.* Mean 4*d.*	3¾*d.*—5¾*d.* Mean 4¾*d.*	90*s.*—110*s.* Mean 100*s.*
Dec. 31.	97⅞	36*s.* 7*d.*	109,506	47,986	3*d.*—5*d.* Mean 4*d.*	3¾*d.*—5¾*d.* Mean 4¾*d.*	65*s.*—75*s.* Mean 70*s.*

State of the Public Health.—England is one of the few countries of the world in which the rate of mortality is lowest in the hot season. In the three months ending September 1851, the mortality, calculated on the population, was at the rate of 2·020 per cent., which was slightly below the average (2·099) of the 10 preceding summer quarters; in the three months ending December 1851, the mortality was at the rate of 2·182 per cent., which, on the other hand, is slightly above the average (2·162) of the 10 preceding autumn quarters. The spring months of April, May, June stand higher than the autumn quarter in the order of mortality; while in the three months of January, February, and March the mortality is highest in winter. The mortality of the quarters of the year is seen in the subjoined table, which also presents a strong argument in favour of the improvement of the sites, dwellings, drainage, cleansing, and water-supply of the large towns of the kingdom.

The mortality of the large towns is, in the first and second half of the year respectively, one-fifth and one-third part higher in the large towns than it is in the country districts and small towns, where many causes of insalubrity also exist. The same causes that destroy the lives of so many people, degrade the lives of more, and may ultimately, it is to be feared, have a very unfavourable effect on the energies of a large proportion of the English race. Here is then a wide field for salutary and beneficent reforms.

The mortality of the large town districts in the last quarter of 1851 is slightly below the average; and this may be hailed with satisfaction as an indication of sanitary activity. Unfortunately the mortality in the small towns, and in the country districts has increased to some extent, and has thus left the mortality of the kingdom above the average.

Scarlatina, measles, small-pox, and fever have been epidemic in many districts, and are still prevailing.

The weather in the three months is shown by the returns collated by Mr. Glaisher to have presented some extraordinary deviations from the ordinary state of things. The fall of rain in the three months was only two-fifths of the usual quantity; many springs and small streams ceased to flow; and the atmosphere, containing less vapour than usual, was dry. The effect of the change in the meteorology on the public health and the growing crops must be carefully watched during the present year.

In London, 14,355 deaths were registered in the quarter, while only 12,956 deaths were registered in the corresponding quarter of the previous year. Upon looking back to 1847, when influenza was epidemic, and 18,586 persons died, there is matter of congratulation in the fact that at present the metropolis is exempt from any extraordinary epidemic, and is, allowing for increase of population, losing less than the average number of lives. 3,137 persons died in 13 weeks of zymotic diseases; by small-pox 339, measles 204, scarlatina 603, hooping-cough 286, diarrhœa 401. These were chiefly children. Only 15 deaths were referred to cholera, 34 deaths were referred to influenza, 1,050 to bronchitis, and 1,053 to pneumonia. The inflammations of the air-tubes and lungs have thus been rather more prevalent than usual, which may be partly the result of the extremely cold weather in November, and partly the consequence of influenza. Consumption was unusually fatal: 1,737 persons died of this disease, which was the cause of one-eighth part of the total deaths. Typhus or continued fever was fatal in 770 instances, erysipelas in 116, metria in 69, other accidents incidental to childbirth in 50. Carbuncle was fatal in 9 cases, and 18 deaths were referred to purpura or scurvy. These diseases are important, as their unusual prevalence denotes a low tone of health, only to be combated by fruit or wine, which is not within the reach of the people. Only 7 deaths were directly ascribed to privation, while 15 were ascribed to intemperance, and 33 to delirium tremens. The deaths by poison are above the average, and call for greater vigilance on the part of its vendors, the chemists and druggists. It is painful to find that in London 28 persons died of poison in 13 weeks. Burns and scalds (69), fractures and contusions (164), and wounds (33), were also unusually fatal; 55 persons died of hanging and suffocation, 58 of drowning, and 12 of other kinds of violence.

Population, Deaths, and Mortality per cent. in the Autumn Quarters of 11 *Years*, 1841-51.

	Population Enumerated		Deaths in Autumn Quarters.		Annual Rate of Mortality of 10 Autumn Quarters, 1841-50.	Annual Rate of Mortality in the Autumn Quarter, 1851.
	June 7th, 1841.	March 31st, 1851.	1841-50.	1851.		
In 117 Districts, comprising the chief towns	6,612,958	7,795,882	454,969	49,282	2·524	2·503
In 506 Districts, comprising chiefly small towns and country parishes	9,301,190	10,126,886	466,070	49,966	1·917	1·963
All England	15,914,148	17,922,768	921,039	99,248	2·162	2·182

Annual Rates of Mortality per cent. deduced from the Returns of 1841-51.

	Winter.	Spring.	Summer.	Autumn.
	January, February, March.	April, May, June.	July, August, September.	October, November, December.
All England	2·457	2·211	2·099	2·162
117 Districts, comprising the chief towns	2·731	2·409	2·522	2·524
506 Districts, comprising chiefly small towns and country parishes	2·252	2·046	1·815	1·917
Excess of the mortality in large towns	·479	·363	·707	·607

MORTALITY OF THE METROPOLIS.

A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending December of the Four Years, 1848–49–50–51.

CAUSES OF DEATH.	Quarters ending Dec. 1848.	1849.	1850.	1851.
ALL CAUSES	14,725	12,877	12,544	13,964
SPECIFIED CAUSES	14,679	12,818	12,443	13,850
I. Zymotic Diseases	5,137	3,227	2,706	3,137
SPORADIC DISEASES.				
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	605	593	564	574
III. Tubercular Diseases	2,058	2,035	2,012	2,390
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,465	1,454	1,476	1,495
V. Diseases of the Heart and Blood-Vessels	479	466	525	582
VI. Diseases of the Lungs and of the other Organs of Respiration	2,064	2,133	2,262	2,510
VII. Diseases of the Stomach, Liver, and other Organs of Digestion	765	703	734	781
VIII. Diseases of the Kidneys, &c.	141	142	153	160
IX. Childbirth, Diseases of the Uterus, &c.	106	124	107	114
X. Rheumatism, Diseases of the Bones, Joints, &c.	105	98	108	99
XI. Diseases of the Skin, Cellular Tissue, &c	17	25	20	24
XII. Malformations	56	39	47	50
XIII. Premature Birth & Debility	292	293	340	399
XIV. Atrophy	288	339	269	297
XV. Age	527	554	536	606
XVI. Sudden*	162	191	147	108
XVII. Violence, Privation, Cold, and Intemperance	412	402	437	524
I. Small Pox	413	99	191	339
Measles	218	338	264	204
Scarlatina	1,765	486	429	603
Hooping Cough	472	273	424	286
Croup	62	80	89	93
Thrush	48	38	39	33
Diarrhœa	375	482	316	401
Dysentery	74	79	41	39
Cholera	468	494	23	15
Influenza	24	49	26	34
Purpura and Scurvy	14	11	13	18
Ague	8	7	5	6
Remittent Fever	30	15	23	24
Infantile Fever†	12	12	15	12
Typhus	883	558	619	770
Metria, or Puerperal Fever, see Childbirth	100	56	55	69
Rheumatic Fever, see Rheumatism	13	20	14	21
Erysipelas	126	109	87	116
Syphilis	32	18	29	43
Noma or Canker, see Mortification	..	3	4	11
Hydrophobia	..	..	..	..
II. Hæmorrhage	42	51	58	38
Dropsy	228	205	183	225
Abscess	27	26	25	20
Ulcer	17	17	18	8
Fistula	2	2	4	6
Mortification	42	36	40	43
Cancer	240	242	219	223
Gout	7	14	17	11
III. Scrofula	92	83	76	84
Tabes Mesenterica	174	165	183	196
Phthisis or Consumption	1,450	1,473	1,455	1,737
Hydrocephalus	342	314	298	373
IV. Cephalitis	115	120	122	113
Apoplexy	336	324	332	330
Paralysis	249	257	280	277
Delirium Tremens	34	29	38	33
Chorea	1	1	1	..
Epilepsy	73	73	79	75
Tetanus	4	5	4	4
Insanity	24	26	24	27
Convulsions	477	473	441	497
Disease of Brain, &c.	152	146	155	139
V. Pericarditis	34	34	39	32
Aneurism	16	20	21	25
Disease of Heart	429	412	465	525
VI. Laryngitis	44	46	32	45
Bronchitis	766	805	922	1,050
Pleurisy	36	24	31	50
Pneumonia	963	989	946	1,053
Asthma	146	174	216	216
Disease of Lungs, &c	109	95	115	96
VII. Teething	91	118	120	99
Quinsey	20	24	24	31
Gastritis	26	18	16	21
Enteritis	96	82	91	89
Peritonitis	62	47	48	68
Ascites	28	33	25	32
Ulceration (of Intestines, &c.)	30	33	22	33
Hernia	46	26	29	29
Ileus	28	22	34	37
Intussusception	9	14	10	8
Stricture of the Intestinal Canal	11	8	11	13
Dis. of Stomach, &c.	86	78	65	79
Disease of Pancreas	..	..	..	..
Hepatitis	45	29	44	40
Jaundice	36	33	36	40
Disease of Liver	147	133	155	157
Disease of Spleen	4	5	4	5
VIII. Nephritis	2	6	10	5
Nephria (or Bright's Disease)	40	31	35	39
Ischuria	1	2	3	5
Diabetes	13	10	17	12
Stone	4	7	6	7
Cystitis	6	13	6	2
Stricture of Urethra	10	6	12	17
Dis. of Kidneys, &c.	65	67	64	73
IX. Paramenia	5	8	2	1
Ovarian Dropsy	8	14	9	14
Childbirth, see Metria	63	60	62	59
Dis. of Uterus, &c.	30	42	34	40
X. Arthritis	3	1	1	3
Rheumatism	69	56	61	51
Disease of Joints, &c.	33	41	46	45
XI. Carbuncle	4	7	3	9
Phlegmon	5	5	4	7
Disease of Skin, &c.	8	13	13	8
XVII. Intemperance	13	15	17	15
Privation	14	8	9	7
Want of Breast Milk, see Privation & Atrophy	35	37	51	77
Neglect	..	..	2	5
Cold, see Privation	..	1	1	1
Poison	24	20	22	28
Burns and Scalds	63	58	49	69
Hanging, &c.	22	41	54	55
Drowning	68	47	59	58
Fractures and Contusions	131	129	142	164
Wounds	31	28	20	33
Other Violence	11	18	11	12
Causes not specified	46	59	101	114

* Under the head of "sudden deaths," are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

† In the years previous to 1848, "Worms" and "Infantile Fever" were classed together. The former, of very rare occurrence, is now placed to diseases of stomach, &c.

METEOROLOGICAL TABLE for the Quarter ending December 31, 1851.

NAMES OF THE PLACES.	Mean Pressure of Dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean daily Range of Temperature.	Mean monthly Range of Temp.	Range of Temperature in the Quarter.	Mean Temperat. of Evaporation.	Mean Temperature of the Dew Point.	WIND. Mean estimated Strength.	WIND. General Direction.	Mean Amount of Cloud.	RAIN. No. of days on which it fell.	RAIN. Amount collected.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional weight required to saturate a cubic Foot of Air.	Mean Degree of Humidity.	Mean whole amount of Water in a Vertical Column of Atmosphere.	Mean Weight of a Cubic Foot of Air.	Height of Cistern of Baromr. above level of the Sea.
	In.	°	°	°	°	°	°	°	°					In.	Gr.	Gr.		In.	Gr.	Feet.
Jersey	29·815	47·3	70·0	27·0	10·6	25·7	43·0	45·0	42·4	1·8	W.N.W. & E.S.E.	6·4	46	9·20	3·4	0·6	0·848	4·1	547	75
Guernsey	29·778	47·7	65·5	33·0	6·6	20·3	32·5	45·9	43·7	1·3	N.W. & N.E.	6 6	50	9·90	3·5	0·5	0·870	4·1	542	123
Helston	29·785	48·6	66·0	31·0	12·6	28·0	35·0	46·7	44·6	1·3	N.W., S.W., & E.	6·8	54	10·30	3·6	0·5	0·875	4·3	542	106
Falmouth	..	48·4	71·0	30·0	12·7	30·3	41·0	..	..	1·2	N.W. & S.	6·8	51	9·72	..	..	..	..	..	120
Truro	29·803	47·8	67·0	24·0	12·8	33·7	43·0	45·6	42·8	0·4	N., N.N.W., & S.W.	6·6	47	10·44	3·3	0·7	0·818	4·1	551	55
Torquay	..	47·1	67·0	32·0	8·5	24·7	35·0	44·5	41·4	2·4	N.N.W. & W.	..	32	5·84	3·2	0·7	0·827	3·9	545	160
Exeter	29·834	45·1	68·0	23·0	12·9	29·3	45·0	44·0	41·3	1·5	N.W. & Var.	4·8	38	6·13	3·3	0·6	0·864	4·0	545	140
Clifton House, Ryde, I. of W.	29·820	44·6	69·0	24·6	12·7	32·2	44·4	43·1	41·5	0·1	N.E. & S.W.	7 3	34	5·95	3·3	0·4	0·888	3·9	546	110
Chichester	..	43·2	65·0	25·0	10·2	28·3	40·0	..	37·2	..	S.W. & N.E.	..	..	4·70	..	..	..	..	..	23
Southampton	29·763	44·8	67·0	25·9	11·6	28·9	41·1	42·7	40·4	0·2	.. ..	6·2	40	5·24	3·2	0·5	0·865	3·8	547	60
Uckfield	29·787	43·6	69·0	19·0	13·2	34·7	50·0	41·7	39·3	0·6	S.W. & N.	6·9	28	5·42	3·1	0·5	0·861	3·7	546	180
Lewisham	29·790	43·4	68·9	22·0	10·8	32·5	46·9	42·1	40·6	0·5	W.S.W. & N.W.	7·2	34	3·39	3·2	0·4	0·908	4·1	548	82
Royal Observatory, Greenwich	29·806	43·6	70·1	24·3	11·0	30·5	45·8	41·2	38·1	..	N.W. & S.W.	..	28	3·00	2·8	0·6	0·828	3·5	548	159
Maidenstone Hill	29·815	44·0	67·8	24·2	8·8	29·6	43·6	42·6	40·8	..	W.S.W & N.	7·0	27	2·80	3·2	0·4	0·898	3·9	547	107
Chiswell Street Brewery	29·828	47·1	69·5	31·0	8·8	25·7	38·0	45·1	36·3	..	S.W. & W.N.W.	..	29	2·93	2·7	0·7	0·794	3·2	545	96
St. John's Wood	29·770	42·7	68·0	22·0	11·7	31·2	46·0	41·5	39·9	1.0	S.W. & N.W.	8·3	34	3·15	3·1	0·3	0·908	3·8	545	150
Rose Hill, near Oxford	29·789	42·3	67·0	21·2	11·4	31·7	45·8	41·6	40·1	1·7	S.S.W. & N.N.W.	6·4	29	4·41	3·1	0·3	0·903	3·7	546	270
Thame, Oxon	29·784	42·7	69·0	21·0	11·4	32·9	48·0	41·6	39·9	0·6	S.S.W. & N.N.W.	6·7	41	4·10	3·1	0·3	0·905	3·8	543	230
Radcliffe Observatory	29·791	43·4	69·8	20·5	11·3	33·1	49·3	41·7	40·4	1·8	S.W., N., & Var.	7·4	32	4·17	3·2	0·4	0·894	3·8	543	210
Stone Observatory	29·757	42·3	68·0	23·0	11·6	31·4	45·0	40·1	37·4	0·5	S.W. & N.N.W.	6·8	42	4·35	2·9	0·5	0·834	3·5	543	320
Hartwell House	29·771	43·5	70·0	21·0	13·2	34·8	49·0	41 4	38·7	0·6	S.W. & W.N.W.	7·0	38	..	3·0	0·6	0·847	3·6	544	250
Hartwell Rectory	29·757	42·3	67·6	21·5	11·1	31·9	46·1	40·8	38·0	0·6	S.W. & N.W.	6·4	46	4·02	3·0	0·4	0·880	3·5	544	290
Aylesbury	29·783	43·5	68·0	22·0	15·0	32·7	46·0	41·6	39·6	0·4	S.W. & W.N.W.	6·5	30	4·40	3·1	0·3	0·888	3·7	548	284
Linslade	29·787	42·0	70·0	19·0	11·7	33·8	51·0	40·6	38·6	..	S.W. & W.N.W.	..	37	4·32	3·0	0·5	0·881	3·5	547	313
Cardington	29·766	42·9	67·8	21·0	12·5	32·7	46·0	41·9	40·5	0·7	S.W. & N.N.W.	6·6	37	4·32	3·2	0·4	0·924	3·5	548	100
Bedford	29·760	43·6	68·5	23·5	11·7	30·6	45·0	42·0	40·0	0·7	S.W. & N.N.W.	6·9	27	3·92	3·1	0·4	0·895	3·7	545	100
Norwich	29·723	43·8	65·0	28·0	10·4	26·3	37·0	42·3	40·2	0·9	W.S.W. & W.N.W.	6·6	47	9·75	3·1	0·4	0·865	3·7	540	39
Derby	29·737	44·4	66·0	21·0	..	32·7	45·0	42·3	39·9	..	WSW., NW., & Var.	..	41	4·93	3·1	0·6	0·859	3·7	548	100
Holkham	29·743	43·7	67·3	25·6	11·8	28·9	42·3	42·4	40·8	1·0	W.S.W. & N.W.	7·4	46	7·70	3·2	0·4	0·902	3·8	543	39
Highfield House	29·727	42·3	70·0	19·2	14·2	36·4	50·8	41·0	38·9	0·3	WSW., WNW., & Var.	7·2	47	5·16	3·0	0·4	0·877	3·6	551	103
Hawarden	29·761	43·5	66·0	24·0	8·5	30·5	42·0	42·1	40·4	1·6	S.W. & W.N.W.	7·0	35	5·40	3·1	0·4	0·901	3·7	546	260
Gainsborough	29·755	42·6	66·0	26·0	11·6	29·2	40·0	40·9	38·6	0·3	S.W. & N.W.	5·6	39	3·40	3·0	0·4	0·873	3·5	548	30
Liverpool Observatory	29·747	45·2	63·4	29·7	6·7	24·0	33·7	43·5	41·9	0·8	Var., N., & S.S.E.	7·5	43	6·86	3·3	0·4	0·904	4·0	547	37
Manchester	29·787	42·2	68·0	21·0	14·1	36·3	47·0	40·8	38·9	..	W.S.W. & N.E.	7·3	38	7·16	3·0	0·4	0·896	3·5	545	137
Wakefield Prison	29·754	42·7	69·5	24·0	12·7	33·7	45·5	41·3	39·0	1·9	W.S.W. & W.N.W.	6·7	46	2·78	3·0	0·5	0·879	3·6	549	115
Stonyhurst	29·761	42·0	63·3	20·7	12·1	34·2	42·6	40·2	34·4	1·4	N.N.W. & S.W.	6·6	47	3·76	2·9	0·5	0·882	3·4	545	381
York	29·777	42·0	65·0	23·0	11·7	32·0	42·0	39·2	35·3	..	SW., SSW., & NW.	..	32	2·82	2·7	0·7	0·796	3·2	542	50
Whitehaven	29 681	44·1	63·0	28·5	7·3	24·8	34·5	43·1	41·7	2·0	S.W. & N.E.	..	52	6·52	3·3	0·3	0·920	3·9	545	90
Durham	29·704	42·3	61·8	26·0	9·0	26·6	35·8	40·9	38·8	1·2	S.W. & N.W.	6·3	30	1·28	3·0	0·4	0·879	3·6	542	340
Newcastle Lit. and Phil. Soc.	29·761	43·5	64·0	23·5	11·2	29·0	40·5	41·3	38·5	..	S.W. & N.W.	..	26	3·24	2·9	0·6	0·842	3·4	545	127
North Shields	29·785	42·6	65·0	28·0	8·2	26·2	37·0	41·5	40·0	2·2	S.W., N.W., & N.E.	5·7	40	2·14	3·1	0·3	0·915	3·7	548	124
Glasgow	29·690	43·7	63·2	25·9	7·8	26·8	37·3	41·3	38·3	..	W.S.W. & E.S.E.	..	43	5·32	2·9	0·6	0·824	3·4	544	121
Dunino	29·653	41·5	64·0	22·0	9·4	29·3	42·0	39·6	37·1	..	WSW., NW., & WNW.	3·8	23	1·84	2·8	0·5	0·861	3·2	544	250

REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th April, 1852; showing the Increase or Decrease thereof.—(*Continued from page* 93.)

Sources of Revenue.	Years ending 5th April.			
	1851.	1852.	Increase.	Decrease.
	£	£	£	£
Customs	18,730,562	18,827,828	97,266	....
Excise	13,125,024	13,182,698	57,674	....
Stamps	6,105,524	5,901,526	....	203,998
Taxes	4,350,731	3,691,226	....	659,505
Property Tax	5,403,379	5,283,800	....	119,579
Post Office	861,000	1,051,000	190,000	....
Crown Lands	160,000	190,000	30,000	....
Miscellaneous	152,566	192,000	39,434	....
Total Ordinary Revenue	48,888,786	48,320,878	414,374	983,082
Imprest and other Moneys .	651,453	522,086	....	129,367
Repayments of Advances	759,126	749,643	....	9,483
Total Income	50,299,365	49,591,807	414,374	1,121,932
Deduct Increase				414,374
Decrease on the Year				707,558

Sources of Revenue.	Quarters ending 5th April.			
	1851.	1852.	Increase.	Decrease.
	£	£	£	£
Customs	4,548,266	4,615,025	66,759	....
Excise	1,980,536	2,070,064	89,528	....
Stamps	1,548,008	1,515,985	....	32,023
Taxes	167,784	295,048	127,264	....
Property Tax	2,089,950	2,068,827	....	21,123
Post Office	272,000	259,000	....	13,000
Crown Lands	40,000	80,000	40,000	....
Miscellaneous	21,974	41,733	19,759	....
Total Ordinary Revenue	10,668,518	10,945,682	343,310	66,146
Imprest and other Moneys	261,765	140,441	....	121,324
Repayments of Advances	141,908	88,608	....	53,300
Total Income	11,072,191	11,174,731	343,310	240,770
Deduct Decrease			240,770	
Increase on the Quarter			102,540	

Consolidated Fund Operations.—The total income brought to this account in the quarter ending 5th April, 1852, was 11,201,080*l.* The total charge upon it was 8,107,898*l.*, leaving a surplus of 3,093,182*l.*

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the First Quarter of 1852; *together with the Average Prices for the whole Quarter.*—(*Continued from p.* 94.)

Returns received at the Corn Office, Board of Trade.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
	Weekly Average	Aggregate Average of Six Weeks' regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending, 1852.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
January 3	37 2	37 4	26 3	17 9	26 11	28 7	28 4
10	37 4	37 4	26 5	17 10	30 1	28 9	28 1
17	38 3	37 6	27 1	18 1	27 5	27 11	28 10
24	39 3	37 10	27 10	18 2	27 10	28 3	28 8
31	39 10	38 2	28 6	18 2	27 6	28 11	28 4
February 7	41 2	38 10	29 8	18 11	29 7	29 0	29 0
14	42 8	39 9	30 7	18 9	29 11	29 10	29 7
21	42 9	40 8	31 0	19 4	30 5	30 2	30 5
28	42 3	41 4	30 7	19 6	30 7	29 10	29 5
March 6	42 7	41 11	30 1	19 4	32 5	30 2	29 6
13	42 10	42 10	30 5	19 9	30 5	30 1	29 7
20	42 8	42 7	30 3	19 9	31 11	30 4	29 10
27	42 2	42 6	30 2	19 6	30 5	30 3	29 8
Average for the Quarter	40 10	..	29 1	18 10	29 7	29 4	29 2

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th January, 5th February, 5th March, and 5th April, 1852; *the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouse at the close of them.*—(*Continued from p.* 94.)

[From the "London Gazette."]

WHEAT.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1852.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th Jan.	176,004	2,834	178,838	176,004	2,835	178,839	7,483	9	7,492
5th Feb.	125,369	235	125,604	126,119	235	126,354	6,733	9	6,742
5th Mar.	116,523	..	116,523	117,614	..	117,614	5,642	9	5,651
5th April	187,458	..	187,458	187,458	..	187,458	5,642	9	5,651

WHEAT-FLOUR.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1852.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th Jan.	345,637	21,113	366,750	345,637	21,113	366,750	1,230	7	1,237
5th Feb.	191,916	186	192,102	191,916	186	192,102	1,230	7	1,237
5th Mar.	172,451	258	172,709	172,451	258	172,709	1,230	7	1,237
5th April	334,381	411	334,792	334,381	411	334,792	7	7	14

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 24th January, the 21st February, the 20th March, and the 17th April, 1852.—(Continued from p. 96.)

[From the "London Gazette."]

ISSUE DEPARTMENT.

	Weeks ending,			
	24th Jan., 1852.	21st Feb., 1852.	20th March, 1852.	17th April, 1852.
	£	£	£	£
Notes issued	31,382,360	32,416,745	33,175,625	33,080,270
Government Debt	11,015,100	11,015,100	11,015,100	11,015,100
Other Securities	2,984,900	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion..	17,348,985	18,383,370	19,142,250	19,046,895
Silver Bullion	33,375	33,375	33,375	33,375
Total	31,382,360	32,416,745	33,175,625	33,080,270

BANKING DEPARTMENT.

Proprietors' Capital....	14,553,000	14,553,000	14,553,000	14,553,000
Rest	3,249,662	3,280,870	3,620,036	3,094,923
Public Deposits	4,768,121	6,392,181	7,520,393	3,265,285
Other Deposits.....	12,187,177	11,916,013	12,300,704	13,906,918
Seven Day and other Bills	1,140,577	1,148,958	1,061,520	1,166,306
Total	35,898,537	37,291,022	39,055,653	35,986,432
Government Securities, including Dead Weight Annuities..	13,269,098	13,550,532	13,567,593	13,395,779
Other Securities	11,336,325	10,979,880	11,722,150	11,086,331
Notes	10,741,950	12,229,325	13,195,605	11,024,320
Gold and Silver Coin ..	551,164	531,285	570,305	480,002
Total	35,898,537	37,291,022	39,055,653	35,986,432

COUNTRY BANKS.

Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks, by which issued in each part of the Kingdom, during the months ending 24th January, 21st February, and 20th March, 1852.—(Continued from p. 96.)

Banks.	24th January, 1852.	21st February, 1852.	20th March, 1852.
England—Private Banks	3,494,550	3,442,728	3,397,281
Joint Stock Banks	2,743,351	2,723,809	2,733,692
Scotland—Chartered, Private, and Joint Stock Banks.....	3,283,502	3,178,859	3,081,769
Ireland—Bank of Ireland, Private and Joint Stock Banks	4,680,456	4,654,156	4,562,494
Total.....	14,201,859	13,999,552	13,775,236

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

SEPTEMBER, 1852.

On the Rate of Mortality in the Medical Profession. By F. G. P. Neison.

[Read before the Statistical Society of London, 15th March, 1852.]

Recently I have had occasion to investigate the rate of mortality among two different classes of medical men; the one class being the Officers of the Medical Department of the Royal Army, and the other, the Members of the Royal Medical Chirurgical Society. The facts relating to the former were collected from the records of the Society formed for the benefit of the Widows of the Officers of the Medical Department of Her Majesty's Army, established in the year 1816, and the facts relating to the latter class were abstracted from the books of the Royal Medical Chirurgical Society, established in the year 1805.

The investigation, so far as related to the first group of facts, was required to be conducted with the greatest care and scrutiny, as the management of large pecuniary interests depended on the results arrived at. The utmost care was, therefore, exercised in this part of the analysis. Inquirers into vital statistics had not hitherto touched the question of the mortality among the members of the medical department of the army, but there was reason to believe from their peculiar duties, and the varied climates to which so many of them are exposed, that some unusual feature would show itself in the mortality to which they are subject, and, therefore, under this conviction, it appeared absolutely necessary to determine, from the records of the Society, the rate of mortality to which its own members have been subject. After a somewhat laborious and very troublesome analysis of all the information procurable, the following exhibits the results arrived at. In the course of this analysis it was discovered that the social condition of the members had an important influence on the rate of mortality, and it was rendered necessary finally to exhibit the rate of mortality in connection with these conditions; and it will be found that the results are not only exceedingly curious but of great practical importance.

In the following table are exhibited the principal elementary facts from which to determine the rate of mortality among the members of the Society, who entered it when unmarried, from the establishment of the Society, in 1816, until the 1st of January, 1851, excluding only such members as may have entered it in the married condition of life.

TABLE I.—*Mortality among Members Entering Single.*

Age.	Number Entered at each Age.	Number remaining under Observation from Age preceding.	Total Number under Observation at each Age.	Died.	Struck off.	Discontinued.	Alive.	Total gone off.	Half of				Number Exposed to Risk.
									Entered.	Struck off.	Discontinued.	Total.	
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*
17...	3	...	3	...	...	...	...	...	1·5	...	...	1·5	1·5
18...	1	3	4	...	...	...	...	...	·5	...	...	·5	3·5
19...	2	4	6	...	...	...	...	...	1	...	...	1	5
20...	21	6	27	2	...	...	...	2	10·5	...	...	10·5	16·5
21...	99	25	124	9	...	3	...	12	49·5	...	1·5	51	73
22...	141	112	253	12	7	5	5	29	70·5	3·5	2·5	76·5	176·5
23...	195	224	419	17	6	12	14	49	97·5	3	6	106·5	312·5
24...	153	370	523	11	9	8	11	39	76·5	4·5	4	85	438
25...	168	484	652	26	15	12	25	78	84	7·5	6	97·5	554·5
26...	133	574	707	25	19	24	24	92	66·5	9·5	12	88	619
27...	62	615	677	10	15	16	25	66	31	7·5	8	46·5	630·5
28...	41	611	652	12	19	14	25	70	20·5	9·5	7	37	615
29...	32	582	614	15	12	12	22	61	16	6	6	28	586
30...	17	553	570	10	12	12	23	57	8·5	6	6	20·5	549·5
31...	31	513	544	13	5	10	28	56	15·5	2·5	5	23	521
32...	32	488	520	17	6	5	29	57	16	3	2·5	21·5	498·5
33...	24	463	487	12	2	4	20	38	12	1	2	15	472
34...	28	449	477	8	5	7	22	42	14	2·5	3·5	20	457
35...	25	435	460	11	3	6	15	35	12·5	1·5	3	17	443
36...	19	425	444	7	3	4	17	31	9·5	1·5	2	13	431
37...	13	413	416	12	4	7	12	35	6·5	2	3·5	12	404
38...	12	391	403	7	...	4	8	19	6	...	2	8	395
39...	20	384	404	4	2	4	9	19	10	1	2	13	391
40...	14	385	399	10	1	4	6	21	7	·5	2	9·5	389·5
41...	9	378	387	14	3	8	11	36	4·5	1·5	4	10	377
42...	9	351	360	12	1	11	5	29	4·5	·5	5·5	10·5	349·5
43..	3	331	334	5	1	7	1	14	1·5	·5	3·5	5·5	328·5
44...	6	320	326	3	1	5	4	13	3	·5	2·5	6	320
45...	6	313	319	5	2	4	7	18	3	1	2	6	313
46...	3	301	304	7	2	2	4	15	1·5	1	1	3·5	300·5
47...	4	289	293	3	1	2	4	10	2	·5	1	3·5	289·5
48...	3	283	286	4	1	7	7	19	1·5	·5	3·5	5·5	280·5
49...	...	267	267	5	1	6	5	17	...	·5	3	3·5	263·5
50...	...	250	250	6	...	1	2	9	...	...	·5	·5	249·5
51...	2	241	243	6	3	4	5	18	1	1·5	2	4·5	238·5
52...	...	225	225	5	1	6	1	13	...	·5	3	3·5	221·5
53...	...	212	212	2	1	3	2	8	...	·5	1·5	2	210
54...	3	204	207	8	...	1	3	12	1·5	...	·5	2	205
55...	2	195	197	5	...	3	4	12	1	...	1·5	2·5	194·5
56...	...	185	185	4	4	2	9	19	...	2	1	3	182
57...	1	166	167	...	...	2	3	5	·5	...	1	1·5	165·5
58...	...	162	162	7	2	7	10	26	...	1	3·5	4·5	157·5
59...	1	136	137	3	1	4	8	16	·5	·5	2	3	134
60...	...	121	121	1	...	1	11	13	...	...	·5	·5	120·5
61...	...	108	108	3	2	...	6	11	...	1	...	1	107
62...	...	97	97	2	...	...	9	11	...	...	...	...	97
63...	...	86	86	4	...	2	5	11	...	...	1	1	85
64...	...	75	75	2	...	2	4	8	...	...	1	1	74
65...	1	67	68	2	2	...	3	7	·5	1	...	1·5	66·5
66...	1	61	62	3	1	1	6	11	·5	·5	·5	1·5	60·5
67...	...	...	51	1	...	...	5	6	...	...	...	...	51
68...	...	...	45	2	1	1	4	8	...	·5	·5	1	44
69...	...	...	37	...	...	...	4	4	...	...	...	...	37
70...	...	...	33	3	...	...	3	6	...	...	...	...	33
71...	...	...	27	...	...	...	2	2	...	...	...	...	27
72...	...	...	25	2	...	...	2	4	...	...	...	...	25
73...	...	...	21	2	...	...	1	3	...	...	...	...	21
74...	...	...	18	1	...	2	2	5	...	...	1	1	17
75...	...	...	13	...	...	...	2	2	...	...	...	...	13
76...	...	...	11	...	...	1	1	2	...	...	·5	·5	10·5
77...	...	...	9	1	...	...	2	3	...	...	...	...	9
78...	...	...	6	2	...	...	...	2	...	...	...	...	6
79...	...	...	4	...	...	...	1	1	...	...	...	...	4
80...	...	...	3	1	...	...	1	2	...	...	...	...	3
81...	...	...	1	...	...	...	1	1	...	...	...	...	1
82...	...	...	...	...	...	...	...	...	...	...	...	...	...
83...	...	...	...	...	...	...	...	...	...	...	...	...	...
84...	...	...	...	...	...	...	...	...	...	...	...	...	...
85...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1,340	...	15,567	386	176	268	510	1,340	670·0	88·0	134·0	892·0	14675·0

To some the explanations given to the headings of the different columns will render them intelligible, but to those not familiar with such inquiries the following explanation may be useful.

Column (*a*) Represents the age at which each officer entered the society, or when other contingent event connected therewith took place.

(*b*) The number of officers entered at each age.

(*c*) The number of officers remaining under observation from each preceding age, and the residue of all those entering in each preceding age, and who have not become subject to any of the contingent events represented in the adjoining columns. For example, three officers entered at the age of 17, and not falling under the events specified in the adjoining columns, they survive until the succeeding age, and come under observation as officers of the age of 18.

(*d*) Again, 1 officer entered at the age of 18, which, with the 3 remaining from those who entered the society at the age of 17, make 4, come under observation at some time or other after completing the 17th year of their life, and before completing the 18th year; none of these become subject to any of the events specified, and the whole 4 are therefore carried under observation to the following age, 19, when 2 other officers entered the society, making 6 under observation at the age of 19. Again, at age 25, 168 officers entered the society, which, with 484 remaining under observation from the preceding age, make 652 altogether under observation at the age 25. Of these, 26 die during the course of that year, 15 are struck off, and 12 discontinue, while 25, who have recently entered the society, remain alive on the 1st of January, 1851, and, therefore, are not longer observed; 78 officers, in all, therefore, go from under observation at the age of 25, and 574 are carried forward to the succeeding age of 26, which, with 133 entered at that age, brings 707 officers altogether under review at the age of 26.

(*e*) Represents the numbers dying at each age or term of life.

(*f*) Those who are struck off.

(*g*) Those who discontinue.

(*h*) Represents the number of officers alive on the 1st of January, 1851, and who have not become subject to any of the contingent events represented in columns *e* to *g* inclusive.

(*i*) Contains the total of columns *e* to *h*, inclusive, and represents the number of officers who cease to come under observation in any of the more advanced ages. For example, at the age 30, column *d* represents 570 under observation; but before attaining the 31st year of age, 57 of these pass from observation, leaving 513 to come under observation in the 31st year of age, as shown in column *c*.

(*j*) Represents one-half of the numbers entering the society at each year of life at which admissions take place, and, is therefore, one-half of the numbers in column *b*. In like manner, column

(*k*) Represents one-half of the numbers in column *f*. In like manner, column

(*l*) Represents one-half the numbers in column *g*; and column

(*m*) The total of columns *j*, *k*, and *l*. The purpose of these four columns will appear in the explanation of column

(*n*) Which represents the number of lives exposed a complete year to the risk of mortality while connected with the society, and the figures in this column are produced by subtracting from the numbers in column *d* the numbers in column *m* opposite the same age. As already stated, column *d* contains the gross number under observation at some time or other throughout the year of life set forth in column *a*; but as column *b* contains, for each age up to 66, the numbers who have entered the society, and as officers, one with another, enter at different periods throughout the year, it has been found, by observation, that on an average each is, during the year of entry, exposed to only six months', or one half-year's mortality, and hence column *j* represents that amount of risk for all officers who have just joined the society. In like manner columns *k* and *l* represent the amount of risk to which officers discontinued from the society for either of the causes specified in those columns, are exposed, on the principle that, one with another, the discontinuances will take place in the middle of the year. It thus appears that as column *m* is the total of *j*, *k*, and *l*, that it shows the proper number to be deducted from column *d*, in order to find the number exposed to the risk of a whole year's mortality.

The following Abstract, A, will make the contents of the preceding table better understood.

ABSTRACT A.

Ages.	Number Exposed to Risk.	Died.	Mortality per Cent.
20—24.....	1016·5	51	5·017
25—29.....	3005·0	88	2·928
30—34.....	2498·0	60	2·402
35—39.....	2064·0	41	1·986
40—44.....	1764·5	44	2·494
45—49.....	1447·0	24	1·660
50—54.....	1124·5	27	2·401
55—59.....	833·5	19	2·280
60—64.....	483·5	12	2·482
65—69.....	259·0	8	3·089
70—74.....	123·0	8	6·504
75—79.....	42·5	3	7·059
80—84.....	4·0	1	25·000
Total....	14665·0	386	2·632

It is thus seen that of 14,665 years of risk, to which the members whose experience is recorded in Table I were exposed, no less than 386 died, or 2·632 per cent., while the mortality according to the average for the whole male population of England and Wales at corresponding ages is 1·888 per cent.; but what is most striking about these results is the very excessive mortality at the ages under 55, and the reduced mortality at the ages 55 and upwards. This will be found to exceed not only the mortality of the male population of England and Wales at the mature and active term of life, but to be actually about equal to that of the officers of the Bengal military service at the corresponding ages. The following exhibits the results for each of the three classes :—

Mortality in the term of life, 20-54, among
The Members of the Medical Department of the Army = 2·593 per cent.
The Officers of the Bengal Army..... = 2·635 ,,
The Male Population of England and Wales ..... = 1·155 ,,

It is thus evident that the rate of mortality among the members of the medical department of the army, who entered the Society while

unmarried, does not differ widely from that found to prevail among the officers of the Bengal army, but at the same time it will be found to exceed the rate of mortality among the male population of this country by 124·502 per cent. This very striking and unexpected result at once proved the necessity for an accurate analysis of the rate of mortality among the members of the Society.

In the preceding Abstract A, there is one feature which cannot fail to arrest attention: the remarkably high and unprecedented mortality at the younger ages, and which gradually decreases up to the age of 40. The following shows the mortality per cent. for each quinquennium in the three preceding groups of observations:—

Ages.	Medical Department of the Royal Army.	Bengal Military Fund.	Male Population of England and Wales.
20—24.....	5·017	2·324	0·845
25—29.....	2·928	2·501	0·981
30—34.....	2·402	2·779	1·049
35—39.....	1·986	2·864	1·134

The mortality at the younger ages in the medical department of the army is certainly a circumstance of much importance, and on more grounds than one, calls for investigation and inquiry; but in order to show how very diversified is the rate of mortality in individual classes of the community, it may be well to direct attention to the remarkable contrast in the results of the three preceding groups, at ages 55 and upwards, or rather within the term of life, 55—84.

The rate of mortality in each of the following classes in the term of life 55-84:
Members of the Medical Department of the Royal Army = 2·922 per cent.
Officers of the Bengal Army ..... = 5·652 „
Male Population of England and Wales..... = 5·056 „

The very low rate of mortality at the advanced ages among the members of the medical department of the army, as set forth in Abstract A, is just as remarkable as the excessive rate found to prevail at the younger ages.

So much having been said on the rate of mortality among those members who entered the society while single or unmarried, attention will next be directed to those who joined the society as married members.

The explanation already given of the construction of Table I will be equally applicable to the following table, and need not, therefore, be repeated.

TABLE II.—*Mortality of those who Entered Married.*

Age.	Number Entered at each Age.	Number remaining under Observation from Age preceding.	Total Number under Observation at each Age.	Died.	Struck off.	Discontinued.	Alive.	Total gone off.	Half of				Number Exposed to Risk.
									Entered.	Struck off.	Discontinued	Total.	
21...	1	...	1	...	...	...	...	...	·5	...	...	·5	·5
22...	1	1	2	...	...	1	...	1	·5	...	·5	1	1
23...	1	1	2	...	...	...	...	...	·5	...	...	·5	1·5
24...	3	2	5	...	...	1	...	1	1·5	...	·5	2	3
25...	3	4	7	...	...	...	...	...	1·5	...	...	1·5	5·5
26...	8	7	15	...	...	...	...	...	4	...	...	4	11
27...	5	15	20	1	...	...	...	1	2·5	...	...	2·5	17·5
28...	6	19	25	...	...	...	...	...	3	...	...	3	22
29...	6	25	31	...	...	...	...	...	3	...	...	3	28
30...	5	31	36	1	...	...	...	1	2·5	...	...	2·5	33·5
31...	9	35	44	...	...	1	...	1	4·5	...	·5	5	39
32...	12	43	55	...	...	...	...	...	6	...	...	6	49
33...	11	55	66	...	...	...	...	...	5·5	...	...	5·5	60·5
34...	13	66	79	...	1	1	...	2	6·5	·5	·5	7·5	71·5
35...	7	77	84	5	...	...	...	5	3·5	...	...	3·5	80·5
36...	8	79	87	...	...	1	...	1	4	...	·5	4·5	82·5
37...	10	86	96	1	1	...	...	2	5	·5	...	5·5	90·5
38...	5	94	99	2	...	...	...	2	2·5	...	...	2·5	96·5
39...	9	97	106	1	...	...	1	2	4·5	...	...	4·5	101·5
40...	11	104	115	3	...	...	...	3	5·5	...	...	5·5	109·5
41...	6	112	118	3	...	1	...	4	3	...	·5	3·5	114·5
42...	6	114	120	2	...	1	...	3	3	...	·5	3·5	116·5
43...	10	117	127	1	...	1	...	2	5	...	·5	5·5	121·6
44...	6	126	131	2	...	1	...	3	3	...	·5	3·5	127·5
45...	9	128	137	4	...	...	...	4	4·5	...	...	4·5	132·5
46...	9	133	142	3	...	...	1	4	4·5	...	...	4·5	137·5
47...	1	138	139	2	...	...	...	2	·5	...	...	·5	138·5
48...	...	137	137	...	1	1	...	2	...	·5	·5	1	136
49...	5	135	140	1	...	...	...	1	2·5	...	...	2·5	137·5
50...	...	139	139	3	...	...	...	3	...	...	...	...	139
51...	1	136	137	8	...	...	1	9	·5	...	...	·5	136·5
52...	3	128	131	...	...	2	...	2	1·5	...	1	2·5	128·5
53...	2	129	131	1	...	...	1	2	1	...	...	1	130
54...	2	129	131	7	...	1	...	8	1	...	·5	1·5	129.5
55...	...	123	123	4	1	1	...	6	...	·5	·5	1	122
56...	1	117	118	3	...	1	...	4	·5	...	·5	1	117
57 ..	1	114	115	5	...	...	...	5	·5	...	...	·5	114·5
58...	...	110	110	4	...	1	2	7	...	...	·5	·5	109·5
59..	2	103	105	5	1	...	3	9	1	·5	...	1·5	103·5
60...	1	96	97	2	...	1	2	5	·5	...	·5	1	96
61...	...	92	92	4	...	1	4	9	...	...	·5	·5	91·5
62...	1	83	84	3	...	...	...	3	·5	...	...	·5	83·5
63...	...	81	81	1	1	...	2	4	...	·5	...	·5	80·5
64...	...	77	77	4	...	...	2	6	...	...	...	...	77
65...	1	71	72	1	...	...	3	4	·5	...	...	·5	71·5
66...	...	68	68	1	...	1	3	5	...	...	·5	·5	67·5
67...	...	63	63	3	...	...	2	5	...	...	...	...	63
68...	...	58	58	3	...	...	3	6	...	...	...	...	58
69...	...	52	52	3	...	1	5	9	...	...	·5	·5	51·5
70...	...	43	43	3	...	...	2	5	...	...	...	...	43
71...	...	38	38	3	1	1	1	6	...	·5	·5	1	37
72...	...	32	32	4	...	1	1	6	...	...	·5	·5	31·5
73...	...	26	26	1	...	1	1	3	...	...	·5	·5	25·5
74...	1	23	23	1	...	...	...	1	·5	...	...	·5	22·5
75...	...	...	23	...	...	...	2	2	...	...	...	...	23
76...	...	...	21	4	...	1	...	5	...	...	·5	·5	20·5
77...	...	...	16	1	...	...	...	1	...	...	...	...	16
78...	...	...	15	3	...	...	3	6	...	...	...	...	15
79...	...	...	9	1	...	...	2	3	..	...	...	...	9
80...	...	...	6	...	...	...	3	3	...	...	...	...	6
81...	...	...	3	...	...	...	1	1	...	...	...	...	3
82...	...	...	2	2	...	...	...	2	...	...	...	...	2
83...	...	...	...	...	...	...	...	...	...	...	...	...	...
84...	...	...	...	...	...	...	...	...	...	...	...	...	...
85...	...	...	...	...	...	...	...	...	...	...	...	...	...
	202	...	4,407	120	7	24	51	202	101·0	3·5	12·0	116·5	4290·5

The following abstract will make the contents of Table II better understood.

ABSTRACT B.

Ages.	Number Exposed to Risk.	Died.	Mortality per Cent.
25—29.....	84·0	1	1·190
30—34.....	253·5	1	·395
35—39.....	451·5	9	1·993
40—44.....	589·5	11	1·866
45—49.....	682·0	10	1·466
50—54.....	663·5	19	2·863
55—59.....	566·5	21	3·823
60—64.....	428·5	14	3·267
65—69.....	311·5	11	3·531
70—74.....	159·5	12	7·524
75—79.....	83·5	9	10·778
80—84.....	11·0	2	18·181
Total....	4284·5	120	2·801

It is thus found that while the collected results for the preceding abstract show a somewhat higher mortality than that in Abstract A, still there is a great dissimilarity at the different periods of life. The mortality, as given in Abstract B, which represents the deaths among such members as entered the society when married, being more in accordance with the results derived from observations on other classes of society exhibiting an increasing rate of mortality as life advances, and pretty uniformly exceeding that for England and Wales. The few irregularities may be fairly supposed to arise from the fluctuations due to the comparatively small number of facts over which the observations recorded in Abstract B extend.

In order to compare the results in this abstract with those already furnished in Abstract A, it will be sufficient to give the rate of mortality within the periods of 25-54 and 55-84.

Ages.	Mortality per Cent. among those Members who entered the Society	
	Unmarried. Abstract A.	Married. Abstract B.
25—54.....	2·386	1·872
55—84.....	2·922	4·422

This abstract affords abundant evidence in support of the conclusion that there is some circumstance connected with the mode or condition of life in which the members of the two classes were placed, having a marked influence on their health and longevity. It is, however, unnecessary to dwell longer on the difference between the preceding two classes, for it is obvious that, in Abstract A, which includes the group entering the society while unmarried, many of them must have married subsequent to the date of entry, and therefore the results do not afford a proper comparison between the mortality incidental to the conditions of married and single life; an analysis has, therefore, been made to show the results peculiar to those conditions.

TABLE III.—*Mortality among Members Entering Single and remaining under Observation whilst Single only.*

Age.	Number Entered at each Age.	Number remaining under Observation from Age preceding.	Total Number under Observation at each Age.	Died.	Struck off.	Discontinued.	Married.	Alive.	Total gone off.	Half of				Total.	Number Exposed to Risk.
										Entered.	Struck off.	Discontinued.	Married.		
17...	3	...	3	...	...	...	...	...	...	1·5	...	...	...	1·5	1·5
18...	1	3	4	...	...	...	...	...	...	·5	...	...	...	.5	3·5
19...	2	4	6	...	...	...	...	...	...	1	...	...	...	1	5
20...	21	6	27	2	...	...	...	...	2	10·5	...	...	...	10·5	16·5
21...	99	25	124	9	...	3	...	...	12	49·5	...	1·5	...	51	73
22...	141	112	253	12	7	4	1	5	29	70·5	3·5	2	·5	76·5	176·5
23...	195	224	419	17	6	12	3	14	52	97·5	3	6	1·5	108	311
24...	153	367	520	11	9	8	2	11	41	76·5	4·5	4	1	86	434
25...	168	479	647	25	15	12	5	25	82	84	7·5	6	2·5	100	547
26...	133	565	698	25	19	23	6	24	97	66·5	9·5	11·5	3	90·5	607·5
27...	62	601	663	10	15	15	9	25	74	31	7·5	7·5	4·5	50·5	612·5
28...	41	589	630	12	19	12	12	24	79	20·5	9·5	6	6	42	588
29...	32	551	583	13	12	10	12	20	67	16	6	5	6	33	550
30...	17	516	533	9	12	11	20	20	72	8·5	6	5·5	10	30	503
31...	31	461	492	10	5	10	17	24	66	15·5	2·5	5	8·5	31·5	460·5
32...	32	426	458	16	6	4	16	26	68	16	3	2	8	29	429
33...	24	390	414	12	2	2	16	18	50	12	1	1	8	22	392
34...	28	364	392	8	5	7	12	17	49	14	2·5	3·5	6	26	366
35...	25	343	368	8	2	4	10	11	35	12·5	1	2	5	20·5	347·5
36...	19	333	352	7	3	3	12	15	40	9·5	1·5	1·5	6	18·5	333·5
37...	13	312	325	11	3	7	7	10	38	6·5	1·5	3·5	3·5	15	310
38...	12	287	299	6	...	4	17	6	33	6	...	2	8·5	16·5	282·5
39...	20	266	286	1	2	4	7	6	20	10	1	2	3·5	16·5	269·5
40...	14	266	280	8	1	4	6	4	23	7	·5	2	3	12·5	267·5
41...	9	257	266	13	3	7	3	8	34	4·5	1·5	3·5	1·5	11	255
42...	9	232	241	9	1	7	6	2	25	4·5	·5	3·5	3	11·5	229·5
43...	3	216	219	4	...	6	6	1	17	1·5	...	3	3	7·5	211·5
44...	6	202	208	2	1	5	7	3	18	3	·5	2·5	3·5	9·5	198·5
45...	6	190	196	3	2	3	4	2	14	3	1	1·5	2	7·5	188·5
46...	3	182	185	3	1	2	3	3	12	1·5	·5	1	1·5	4·5	180·5
47...	4	173	177	2	1	1	2	2	8	2	·5	·5	1	4	173
48...	3	169	172	1	...	7	3	5	16	1·5	...	3·5	1·5	6·5	165·5
49...	...	156	156	2	...	4	7	3	16	...	...	2	3·5	5·5	150·5
50...	...	140	140	3	...	1	2	2	8	...	...	·5	1	1·5	138·5
51...	2	132	134	4	2	2	3	2	13	1	1	1	1·5	4·5	129·5
52...	...	121	121	1	...	3	2	1	7	...	...	1·5	1	2·5	118·5
53...	...	114	114	1	...	2	5	2	10	...	...	1	2·5	3·5	110·5
54...	3	104	107	7	...	1	1	3	12	1·5	...	·5	·5	2·5	104·5
55...	2	95	97	2	...	1	1	2	6	1	...	·5	·5	2	95
56...	...	91	91	2	4	1	2	4	13	...	2	·5	1	3·5	87·5
57...	1	78	79	...	...	2	...	1	3	·5	...	1	...	1·5	77·5
58...	...	76	76	3	2	6	...	2	13	...	1	3	...	4	72
59...	1	63	64	...	...	2	2	3	7	·5	...	1	1	2·5	61·5
60...	...	57	57	...	...	1	...	5	6	...	...	·5	...	·5	56·5
61...	...	51	51	...	1	...	...	2	3	...	·5	...	...	·5	50·5
62...	...	48	48	1	...	...	...	4	5	...	...	...	...	...	48
63...	...	43	43	2	...	2	...	1	5	...	...	1	...	1	42
64...	...	38	38	...	...	2	...	1	3	...	...	1	...	1	37
65...	1	35	36	2	2	...	...	2	6	·5	1	...	...	1·5	34·5
66...	1	30	31	...	1	...	...	2	3	·5	·5	...	...	1	30
67...	...	...	28	...	...	...	...	4	4	...	...	...	...	...	28
68...	...	...	24	...	1	...	...	1	2	...	·5	...	...	·5	23·5
69...	...	...	22	...	...	...	...	1	1	...	...	...	...	...	22
70...	...	...	21	1	...	...	...	2	3	...	...	...	...	...	21
71...	...	...	18	...	...	...	...	1	1	...	...	...	...	...	18
72...	...	...	17	1	...	...	...	2	3	...	...	...	...	...	17
73...	...	...	14	1	...	...	...	1	2	...	...	...	...	...	14
74...	...	...	12	...	...	1	...	2	3	...	...	·5	...	·5	11·5
75...	...	...	9	...	...	...	...	1	1	...	...	...	...	...	9
76...	...	...	8	...	...	...	...	1	1	...	...	...	...	...	8
77...	...	...	7	1	...	...	...	2	3	...	...	...	...	...	7
78...	...	...	4	1	...	...	...	...	1	...	...	...	...	...	4
79...	...	...	3	...	...	...	...	1	1	...	...	...	...	...	3
80...	...	...	2	...	...	...	...	1	1	...	...	...	...	...	2
81...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	1
82...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
83...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
84...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
85...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1,340	...	12,113	304	165	228	249	394	1,340	670·0	82·5	114·0	124·5	991·0	11139·0

The first part of the inquiry, made to show the results connected with the mortality of single life, will be found set forth in the preceding table, which contains all the facts bearing on the rate of mortality among such members as entered the society in the single condition, and the observations extended over the period while they remained single; in the event of any member becoming married, all further observation ceases.

The following Abstract, C, shows the results arrived at in Table III.

ABSTRACT C.

Ages.	Number Exposed to Risk.	Died.	Mortality per Cent.
20—24.....	1011·0	51	5·045
25—29	2905·0	85	2·926
30—34.....	2150·5	55	2·558
35—39.....	1543·0	33	2·138
40—44.....	1162·0	36	3·099
45—49.....	858·0	11	1·282
50—54.....	601·5	16	2·660
55—59.....	393·5	7	1·779
60—64.....	234·0	3	1·282
65—69.....	138·0	2	1·449
70—74.....	81·5	3	3·681
75—79.....	31·0	2	6·451
80—84.....	3·0	....	....
Total....	11112·0	304	2·736

This abstract shows that the results characteristic of Abstract A are still more strongly developed here; the mortality of early life being higher, that of advanced life lower, and the general mortality being even higher than that of Abstract A. It would hence follow that the elimination of the cases of those who subsequently become married has the effect of increasing the general mortality for the residue, as well as increasing the mortality at the early ages and diminishing it at the advanced periods of life. This will more clearly be seen by an inspection of the following figures:—

Ages.	Mortality per Cent. among all those who entered Single. Abstract A.	Mortality per Cent. of those who entered Single, but excluding further observation after becoming Married. Abstract C.
20—54.....	2·593	2·805
55—84.....	2·922	1·918
20—84.....	2·632	2·736

It is hence evident that the vicissitudes of unmarried life have a more powerful influence on mortality under the age of 55 than above it, compared with the causes connected with the married condition, and further evidence of this will be derived from the following two tables.

In the next abstract are included such facts only as constitute the complement of Table III, that is, the observations connected with those who have entered the society while single, but who afterwards married; the observations commencing from the date of marriage; and therefore the facts in Table III and the following abstract, constitute the whole of those given in Table I. It has already been shown that the aggregate mortality of Table III exceeds that of Table I, and therefore the mortality of the next abstract must fall under that of Table I; but it has also been shown that the mortality of Table III has, in an eminent degree, portrayed the features characteristic of Table I, and, consequently, Abstract IV, following, must be expected to be more uniform, and approximate more nearly to the rate of mortality prevailing in Table II.

ABSTRACT D.

Mortality of those who entered Single, but afterwards Married; the observations commencing at Marriage.

Ages.	Number Exposed to Risk.	Died.	Mortality per Cent.
20—24.....	5·5	....	....
25—29.....	100·0	3	3·000
30—34.....	347·5	5	1·439
35—39.....	521·0	8	1·536
40—44.....	602·5	3	1·328
45—49.....	589·0	13	2·207
50—54.....	523·0	11	2·103
55—59.....	440·0	12	2·727
60—64.....	249·5	9	3·607
65—69.....	121·0	6	4·959
70—74.....	41·5	5	12·048
75—79.....	11·5	1	8·070
80—84.....	1·0	1	100·000
Total....	3553·3	82	2·308

The following shows the condensed results of this abstract:—

Mortality from ages 20—54 = 1·785 per cent.
,, ,, 55—84 = 3·944 ,,
,, ,, 20—84 = 2·308 ,,

Table III, preceding, showed the rate of mortality among such

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members who entered single during the period they continued so, all further observation ceasing after marriage; and in the next abstract will be set forth the rate of mortality among such members who entered married, and will embrace all the facts given in Table II, as well as those who may have entered single but afterwards married, the observations commencing at the date of marriage, and will include the facts contained in Abstract D.

ABSTRACT E.

Mortality among Members entered Married, and entered Single but afterwards Married; the Single coming under observation at Marriage.

Ages.	Number Exposed to Risk.	Died.	Mortality per Cent.
25—29.....	184·0	4	2·174
30—34.....	601·0	6	·998
35—39.....	972·5	17	1·748
40—44.....	1192·0	19	1·594
45—49.....	1271·0	23	1·810
50—54.....	1186·5	30	2·529
55—59.....	1006·5	33	3·279
60—64.....	678·0	23	3·392
65—69.....	432·5	17	3·931
70—74.....	201·0	17	8·458
75—79.....	95·0	10	10·526
80—84.....	12·0	3	25·000
Total....	7832·0	202	2·580

In this abstract the following will be found to represent the general results arrived at:—

Mortality from ages 25—54 = 1·831 per cent.
,, ,, 55—84 = 4·247 ,,
,, ,, 25—84 = 2·580 ,,

The results of this abstract, as compared with those of Table III and Abstract C, are interesting, as showing the distinction between the mortality of married and single life. The following gives a condensed illustration of the difference of mortality:—

Ages.	Mortality per Cent. between the Married and Single Members of the Society.	
	Single Members. Abstract C.	Married Members. Abstract E.
25—54.....	2·559	1·831
55—84.....	1·918	4·247
25—84.....	2·504	2·580

In this, as in the preceding instances, it is obvious that the characteristic of the mortality of single life is still maintained, the rate of mortality among the unmarried members being greater at the earlier ages, and less at those ages more advanced.

Having thus exhibited the rate of mortality for each of the preceding groups and combinations, it may be now useful to show the results for the combined experience of all the members, whether married or single. The following Abstract F shows, for each quinquennial term of life, the rate of mortality among all the members of the society, from its establishment in 1816, till the 1st of January, 1851.

ABSTRACT F.

Mortality among all the Members, Married and Single.

Ages.	Number Exposed to Risk.	Died.	Mortality per Cent.
20—24.....	1016·5	51	5·017
25—29.....	3089·0	89	2·881
30—34.....	2751·5	61	2·217
35—39.....	2515·5	50	1·988
40—44.....	2354·0	55	2·336
45—49.....	2129·0	34	1·597
50—54.....	1788·0	46	2·573
55—59.....	1400·0	40	2·857
60—64.....	912·0	26	2·850
65—69.....	570·5	19	3·330
70—74.....	282·5	20	7·080
75—79.....	126·0	12	9·524
80—84.....	15·0	3	20·000
Total....	18949·5	506	2·670

The condensed results are as follows :—

Mortality between ages 20—54 = 2·467 per cent.
,, ,, 55—84 = 3·629 ,,
,, ,, 20—84 = 2·670 ,,

The next abstract will give a succinct view of the results set forth in each of the preceding six abstracts, as well as the general mortality at the corresponding ages for the male population of England and Wales, as given in "Contributions to Vital Statistics," pages 4 and 6.

ABSTRACT G.

Ages.	Mortality per Cent.						
	Entered Single. A.	Entered Married. B.	Entered Single, and remaining under observation while Single. C.	Entered Single, but afterwards Married; the observations commencing at Marriage. D.	Entered Married and entered Single, but the Single coming under observation at Marriage. E.	All the Members, Married and Single. F.	Male Population of England and Wales.
20—24....	5·017	....	5·045	....	....	5·017	·845
25—29....	2·928	1·190	2·926	3·000	2·174	2·881	·981
30—34....	2·402	·395	2·558	1·439	·998	2·217	1·049
35—39....	1·986	1·993	2·138	1·536	1·748	1·988	1·134
40—44....	2·494	1·866	3·099	1·328	1·594	2·336	1·279
45—49....	1·660	1·466	1·282	2·207	1·820	1·597	1·506
50—54....	2·401	2·863	2·660	2·103	2·529	2·573	1·842
55—59....	2·280	3·823	1·779	2·727	3·279	2·857	2·393
60—64....	2·482	3·267	1·282	3·607	3·392	2·850	3·242
65—69....	3·089	3·531	1·449	4·959	3·931	3·330	4·608
70—74....	6·553	7·524	3·681	12·048	8·408	7·080	6·686
75—79....	7·059	10·778	6·451	8·700	10·526	9·528	10·041
80—84....	25·000	18·181	....	100·000	25·000	20·000	15·055
Total....	2·632	2·801	2·736	2·308	2·580	2·670	2·025

The following gives a condensed view of the results arrived at for each of the preceding groups or classes:—

Groups or Classes.	Mortality per Cent. between		
	Ages 25—54.	Ages 55—84.	Ages 25—84.
Abstract A.—Entered single	2·386	2·922	2·454
,, B.—Entered married	1·872	4·422	2·801
,, C.—Members of Abstract A during *un*married state	2·559	1·918	2·504
,, D.—Members of Abstract A during married state	1·789	3·944	2·312
,, E.—Married members	1·831	4·247	2·580
,, F.—Both single and married members	2·290	3·629	2·537
Male population of England aud Wales	1·166	5·056	1·918

As already stated, each abstract gives the data and correct rate of mortality for each quinquennial period of life; and the above condensed form of exhibiting the mortality per cent. may, for general purposes, be considered sufficient to illustrate the relative bearing of the different groups; but, at the same time, it is necessary to exercise caution against the employment of those figures or others similarly derived, and extending over any considerable term of life, as giving an exact expression of the true mortality among the different classes compared. The true mortality can only be collected from the details of each of the preceding tables, or from the rate of mortality given for

each quinquennium in the corresponding abstracts A, B, C, D, E, and F. The nature of the error contained in the condensed illustrations will be found explained in page 41 of "Contributions to Vital Statistics." The conditions necessary to the correct comparison of results derived from observations extending over a considerable term of life, such as between ages 25-54, 55-84, and 25-84, or any other extended periods of life are, that the relative numbers of persons over which the observations are made at the different periods of life should be in exact proportion to each other in the different groups of observations; but should there be in any one group an undue proportion of persons at the younger or older ages, the resulting rate of mortality will become modified accordingly, even although out of equal numbers in each group at different ages the same number of deaths would take place in the same time. Inattention to the errors inherent in such illustrations has often led inquirers to very false conclusions; the method is, however, useful, if employed only for general purposes, and with proper caution. The following figures exhibit the number of years' risk observed on at each term of life.

Groups.	Number of Years' Observation at the Term of Life.			
	25—54.	Proportion per Cent.	55—84.	Proportion per Cent.
Abstract A.—Entered single	11903·0	87·1	1745·5	12·9
,, B.—Entered married	2724·0	63·5	1560·5	36·5
,, C.—Members of Abstract A during *un*married state	9220·0	91·3	881·0	8·7
,, D.—Members of Abstract A during married state	2683·0	75·6	864·5	24·4
,, E.—Married members	5407·0	69·0	2425·0	31·0
,, F.—Both single and married members	14627·0	81·6	3306·0	18·4

It is evident that in some of the above groups there is very great irregularity in the distribution of the number of facts, or years of risk observed at different ages, and hence the rate of mortality per cent. derived from these collected or aggregated results, and which must necessarily be a mean of such irregularly distributed facts, cannot be relied on as showing the correct relation of the causes of mortality pressing on each class of observations. These remarks apply with greater force to the comparison of the results for the aggregate of all ages, than to the comparative results for either of the extended terms of life, 25-54, or 55-84. It will be seen that in Group C, 91·3 per cent. of the facts are contained between ages 25-54, but in Group B there is only 63·5 per cent. of the observation of that group made between the same ages.

There is another method, however, by which the aggregate mortality of the combined ages may be compared without any error, and that is by comparing the actual number of deaths which has taken place, in each class or group, with that which would have taken place if the rate of mortality had prevailed at each term of life in each group, which is known to correctly represent the mortality at the same terms

of life in any given or standard table of mortality with which the results of each group may be compared.

The following shows the number of deaths which have actually taken place in each group, and the number which would have taken place had the same rate of mortality prevailed which is known to represent the mortality of the male population of this country.

Groups.	Difference between the Mortality which has actually taken place and that which would have happened, according to the ratio for the Male Population of England and Wales, between the following ages:								
	20—54.			55—84.			20—84.		
	Actual	England and Wales.	Difference per Cent.	Actual	England and Wales.	Difference per Cent.	Actual	England and Wales.	Difference per Cent.
Abstract A. Entered Single ...	335	151·8	+120	51	59·5	−15	386	211·3	+ 83
„ B. Entered Married	51	38·5	+ 34	69	62·1	+11	120	100·6	+ 20
„ C. Members of Abstract A during *un*married state.....	287	116·0	+147	17	32·3	−47	304	148·3	+101
„ D. Members of Abstract A during married state	48	35·8	+ 33	34	27·2	+26	82	63·0	+ 30
„ E. Married Members	99	74·3	+ 33	103	89·3	+15	202	163·6	+ 24
„ F. Both Married and Single Members.....	386	190·3	+113	120	121·6	− 1	506	311·9	+ 62

An examination of the above results only confirm the conclusions formerly arrived at; namely, that the members taken in the aggregate under the age of 55 are subject to an unprecedented amount of mortality, but that subsequent to that age the rate of mortality does not differ widely from that of the population generally, as may be more apparent from the following figures taken from the preceding abstract:—

	Actual.		England and Wales.
Number of deaths between the ages	20—54 = 386	.....	190·3
„ „	55—84 = 120	.....	121·6
„ „	20—84 = 506	.....	311·9

It is also evident, from the results of the preceding abstract, as well as from those formerly brought under consideration, that the mortality in Group E. which represents the married members, differs very widely from that in Group C, which represents the *un*married.

Period of Life.	Difference per Cent. between the Actual Mortality and that of England and Wales among the	
	Unmarried Group.	Married Group.
Between ages 20—54	+ 147 per cent.	+ 33 per cent.
„ „ 55—84	− 47 „	+ 15 „
„ „ 20—84	+ 101 „	+ 24 „

It is thus abundantly evident that the rate of mortality of the married members is so very different from that of the single, that in any calculations intended to measure the duration of life among the married members only, it would not be proper to include the mortality of the single members.

The following table is formed from the data given in Abstract E, preceding, and represents the mortality for the mean of each quinquennial term of life among the married members of the society.

TABLE IV.

Married Members.

Interpolation of Mortality per Cent.

(1) Original Quantities.

Δ_1 and Δ_2 = 1st and 2nd Differences.

$a = \cdot 2\,\Delta_1$

$b = \cdot 04\,\Delta_2$

Age.	(1.)	Δ_1	Δ_2
27.....	2·174	— 1·176	+ 1·926
		a = — ·2352	b = + ·07704
32.....	·998	+ ·750	— ·904
		+ ·1500	— ·03616
37.....	1·748	— ·154	+ ·370
		— ·0308	+ ·01480
42.....	1·594	+ ·216	·503
		+ ·0432	·02012
47.....	1·810	·719	+ ·031
		·1438	+ ·00124
52.....	2·529	·750	— ·637
		·1500	— ·02548
57.....	3·279	·113	+ ·426
		·0226	+ ·01704
62.....	3·392	·539	+ 3·988
		·1078	+ ·15952
67.....	3·931	4·527	— 2·459
		·9054	— ·09836
72.....	8·458	2·068	+ 12·406
		·4136	+ ·49624
77.....	10·526	+ 14·474	....
		+ 2·8948	
82.....	25·000	....	....

The next table, viewed in connexion with the preceding one, shows the mode by which the intermediate terms are determined and interpolated between the original quantities given in Abstract E. For an explanation, more in detail, of the construction of this table, the preceding table, and the following table, see the paper on the "Mortality of Master Mariners" in vol. xiii. of the *Journal of the Statistical Society.*

TABLE V.

Married Members.

Interpolation of Mortality per Cent.

$$\text{Interval} = \frac{1}{5}$$

(1) = Original Quantities.

1st $\delta_1 = a - 2b$.

$\delta_2 = b$.

Age.	(1.)	δ_1	Age.	(1.)	δ_1
27.....	2·174		47.....	1·810	
		− ·38928			·14132
28.....	1·78472		48.....	1·95132	
		·31224			·14256
29	1·47248		49.....	2·09388	
		·23520			·14380
30.....	1·23728		50.....	2·23768	
		·15816			·14504
31.....	1·07912		51.....	2·38272	
		− ·08112			·14628
32.....	·998		52.....	2·529	
		+ ·22232			·20096
33.....	1·22032		53.....	2·72996	
		·18616			·17548
34.....	1·40648		54.....	2·90544	
		·15000			·15000
35.....	1·55648		55.....	3·05544	
		·11384			·12452
36.....	1·67032		56.....	3·17996	
		+ ·07768			+ ·09904
37.....	1·748		57.....	3·279	
		− ·06040			− ·01148
38.....	1·68760		58.....	3·26752	
		·04560			+ ·00556
39.....	1·64200		59.....	3·27308	
		·03080			·02260
40.....	1·61120		60.....	3·29568	
		·01600			·03964
41.....	1·59520		61.....	3·33532	
		− ·00120			+ ·05668
42.....	1·594		62.....	3·392	
		+ ·00296			− ·21124
43.....	1·59696		63.....	3·18076	
		·02308			− ·05172
44.....	1·62004		64.....	3·12904	
		·04320			+ ·10780
45.....	1·66324		65.....	3·23684	
		·06332			·26732
46.....	1·72656		66.....	3·50416	
		·08344			·42684

TABLE V.—*Continued.*

Age.	(1).	δ_1	Age.	(1).	δ_1
67.....	3·931		77.....	10·526	
		1·10212			1·90232
68.....	5·03312		78.....	12·42832	
		1·00376			2·39856
69.....	6·03688		79.....	14·82688	
		·90540			2·89480
70.....	6·94228		80.....	17·72168	
		·80704			3·39104
71.....	7·74932		81.....	21·11272	
		+ ·70868			+ 3·88728
72.....	8·458		82.....	25·000	....
		− ·57888			
73.....	7·87912		....	....	....
		− ·08264			
74.....	7·79648		....	....	....
		+ ·41360			
75.....	8·21008		....	....	....
		·90984			
76.....	9·11992		....	....	....
		1·40608			

From the results obtained in Table V the following Table of Decrements is derived :—

TABLE VI.—*Married Members.*

Age.	Mortality per Cent. $= d.$ $1-\frac{d}{100}.$	λl $\lambda\left(1-\frac{d}{100}\right)=c$ $5+\Sigma(c)=\lambda l.$	Number Living $= l.$	Number Dying.	Age.	Mortality per Cent. $= d.$ $1-\frac{d}{100}.$	λl $\lambda\left(1-\frac{d}{100}\right)=c$ $5+\Sigma(c)=\lambda l.$	Number Living $= l.$	Number Dying.
25....	2·174	5·00000	100,000	2,175	37....	1·748	4·91702	82,608	1,445
	·97826	9·99045				·98252	9·99234		
26....	2·174	4·99045	97,825	2,128	38....	1·688	·90936	81,163	1,369
	·97826	·99045				·98312	·99261		
27....	2·174	·98090	95,697	2,081	39....	1·642	·90197	79,794	1,310
	·97826	·99045				·98358	·99281		
28....	1·785	·97135	93,616	1,671	40....	1·611	·89478	78,484	1,264
	·98215	·99218				·98389	·99295		
29....	1·472	·96353	91,945	1,353	41....	1·595	·88773	77,220	1,231
	·98528	·99356				·98405	·99302		
30....	1·237	·95709	90,592	1,121	42....	1·594	·88075	75,987	1,212
	·98763	·99459				·98406	·99302		
31....	1·079	·95168	89,471	966	43....	1·597	·87377	74,777	1,194
	·98921	·99529				·98403	·99301		
32....	·998	·94697	83,505	882	44....	1·620	·86678	73,583	1,191
	·99002	·99565				·98380	·99291		
33....	1·220	·94262	87,623	1,168	45....	1·663	·85969	72,392	1,203
	·98780	·99467				·98337	·99272		
34....	1·406	·93729	86,555	1,217	46....	1·727	·85241	71,189	1,229
	·98594	·99385				·98273	·99244		
35....	1·556	·93114	85,338	1,328	47....	1·810	·84485	69,960	1,266
	·98444	·99319				·98190	·99207		
36....	1·670	4·92433	84,010	1,402	48....	1·951	4·83692	68,694	1,339
	·98330	9·99269				·98049	9·99145		

TABLE VI.—*Continued.*

Age.	Mortality per Cent. $= d.$ $1-\frac{d}{100}.$	$\lambda\, l$ $\lambda\left(1-\frac{d}{100}\right)=c$ $5+\Sigma(c)=\lambda\, l.$	Number Living $= l.$	Number Dying.	Age.	Mortality per Cent. $= d.$ $1-\frac{d}{100}.$	$\lambda\, l$ $\lambda\left(1-\frac{d}{100}\right)=c$ $5+\Sigma(c)=\lambda\, l.$	Number Living $= l.$	Number Dying.
49....	2·094	4·82837	67,355	1,410	75....	8·210	4·34772	22,270	1,828
	·97906	9·99081				·91790	9·96280		
50....	2·238	·81918	65,945	1,476	76....	9·120	·31052	20,442	1,864
	·97762	·99017				·90880	·95847		
51..	2·383	·80935	64,469	1,537	77....	10·526	·26899	18,578	1,956
	·97617	·98952				89474	·95170		
52....	2·529	·79887	62,932	1,593	78....	10·924	·22069	16,622	1,816
	·97471	·98887				·89076	·94976		
53....	2·730	·78774	61,339	1,674	79....	11·896	·17045	14,806	1,761
	·97270	·98798				·88104	·94500		
54....	2·905	·77572	59,665	1,733	80....	12·889	·11545	13,045	1,681
	·97095	·98720				·87111	·94008		
55....	3·055	·76292	57,932	1,770	81....	13·972	·05553	11,364	1,588
	·96945	·98652				·86028	·93464		
56...	3·180	·74944	56,162	1,786	82....	15·055	3·99017	9,776	1,472
	·96820	·98597				·84945	·92913		
57....	3·279	·73541	54,376	1,783	83....	16·206	·91930	8,304	1,346
	·96721	·98552				·83794	·92321		
58....	3·268	·72093	52,593	1,719	84....	17·399	·84251	6,958	1,210
	·96732	·98557				·82601	·91699		
59....	3·273	·70650	50,874	1,664	85....	18·716	·75950	5,748	1,076
	·96727	·98555				·81284	·91000		
60...	3·296	·69205	49,210	1,622	86....	20·098	·66950	4,672	939
	·96700	·98545				·79902	·90256		
61....	3·335	·67750	47,588	1,587	87....	21·777	·57206	3,733	813
	·96665	·98527				·78223	·89333		
62....	3·392	·66277	46,001	1,560	88....	23·095	·46539	2,920	674
	·96608	·98501				·76905	·88595		
63....	3·181	·64778	44,441	1,413	89...	24·687	·35134	2,246	555
	·96819	·98597				·75313	·87687		
64....	3·129	·63375	43,028	1,347	90....	26·277	·22821	1,691	444
	·96871	·98619				·73723	·86760		
65....	3·237	·61994	41,681	1,349	91....	27·877	·09581	1,247	348
	·96763	·98571				72·123	·85808		
66....	3·504	·60565	40,332	1,412	92...	29·528	2·95389	899	265
	·96496	·98452				·70472	·84801		
67....	3·931	·59017	38,920	1,530	93 ...	31·127	·80190	634	198
	·96069	·98259				·68873	·83805		
68...	5·033	·57276	37,390	1,882	94....	32·817	·63995	436	143
	·94967	·97757				·67183	·82726		
69....	6·037	·55033	35,508	2,144	95....	34·297	·46721	293	100
	·93963	·97295				·65703	·81759		
70....	6·942	·52328	33,364	2,316	96....	35·572	·28480	193	69
	·93058	·96875				·64428	·80908		
71....	7·749	·49203	31,048	2,406	97....	36·644	·09388	124	45
	·92251	·96497				·63356	·80179		
72....	8·458	·45700	28,642	2,423	98....	37·482	1·89567	79	30
	·91542	·96162				·62518	·79601		
73....	7·879	·41862	26,219	2,066	99....	38·066	·69168	49	19
	·92121	·96435				·61934	·79163		
74....	7·796	4·38297	24,153	1,883	100....	38·650	·48361	30	11
	·92204	9·96475				·61350	9·78781		
					101....		1·27142	19	7

An examination of the results set forth in column 4 of this table shows that of the population living at age 25, one-half only will be alive in about thirty-four years afterwards, but in the male population of England and Wales one-half would be alive for forty years afterwards. The following shows the equation of life in the above table, which represents the mortality of the married members of the society, and also according to the mortality of the male population of England and Wales.

Ages.	Equation of Life among the	
	Married Members of the Society. Table VI.	Males. England and Wales.
25.....	34·525	40·309
30.....	32·453	36·482
40.....	26·772	28·790
50.....	20·169	21·255

The next portion of this paper relates to the rate of mortality among the members of the Royal Medical-Chirurgical Society, deduced from a list which was furnished to me of all the resident members elected into the Society since its establishment in the year 1805, specifying the date of election, the causes of withdrawal or removal from the Society, or whether they still continue members. This list has been analyzed so as to exhibit, in a clear and simple manner, the rate of mortality among the members.

In the first place attention is directed to Table A,* which furnishes a very interesting and succinct view of the changes of the Society, in respect to the election and withdrawal of its members for each year since the commencement. From the second column of this table it will be seen that, since the year 1805, 684 resident members have been elected, and, by column 5, 96 of these have died, and, according to column 6, 280 have either resigned or, from some cause or other, have ceased to be resident members, so that out of the whole 684 members elected, 376 have now, from various causes, ceased to belong to the society, leaving, at the period up to which the abstracts were completed, 308 existing members. The other columns of this table explain themselves, but the point to which attention is now specially directed is that of the rate of mortality amongst the members. The last column of Table A shows the rate of mortality, but the following abstract gives a more condensed and convenient view of the results arrived at:—

* See page 271.

ABSTRACT I.

Years.	Number Exposed to Risk.	Died.	Mortality per Cent.
1805 to 1809	303·0	1	0·330
1810 ,, 1814	410·5	....	0·000
1815 ,, 1819	710·0	3	0·423
1820 ,, 1824	926·0	5	0·539
1825 ,, 1829	950·0	17	1·789
1830 ,, 1834	795·5	21	2·639
1835 ,, 1839	933·0	9	0·965
1840 ,, 1844	1278·5	14	1·095
1845 ,, 1849	1527·5	26	1·702
Total	7834·0	96	1·225

So far as these results extend, and considering the limits within which the ages of the members, on admission, must range, it is evident that the mortality of the members is under that of the population of the country generally.

Attention is next requested to Table B,* which very much resembles Table A, only that the final column exhibits the ratio of withdrawals from all causes, inclusive of deaths, for each year of the Society's existence. From the following condensed abstract of this table, it will be seen that, with the exception of the first quinquennial period of years, there is no very extraordinary fluctuation in the ratio of withdrawals from the general average.

ABSTRACT II.

Year of Entry.	Number Exposed to Risk of Withdrawal.	Total gone off.	Per Centage of Total Withdrawals.
1805 to 1809	304·0	3	0·987
1810 ,, 1814	421·5	22	5·219
1815 ,, 1819	721·5	26	3·604
1820 ,, 1824	944·5	42	4·447
1825 ,, 1829	967·5	52	5·375
1830 ,, 1834	816·5	63	7·716
1835 ,, 1839	942·0	27	2·866
1840 ,, 1844	1295·5	48	3·705
1845 ,, 1849	1561·0	93	5·951
Total	7974·0	376	4·715

It is obvious, however, that Tables A and B give, simply, a chronological view of the Society since its commencement, exhibiting the changes which have taken place in its members during each particular year; but it is evident that the more important aspect in which to look at the question is under chances of withdrawal from the Society, from various causes, during the first, second, and each succeeding year of membership, without regard to the chronological dates of these events.

* See page 218.

Table C* has, therefore, been constructed on this hypothesis; the first column shows the years of membership, the second column shows the number of members who have been 1, 2, 3, 4, &c., years connected with the Society, and the other columns sufficiently explain themselves. It thus appears that of the 684 members elected, *one* died in the first year of membership, and 15 still remain alive, being in the first year of membership. Again, 668 entered on the second year of membership, 2 died in that year, 10 withdrew from other causes, and 22 are alive who are members of not more than two years' standing. Also 4 entered on the forty-second year of their membership, 1 died in that year, and 1 of them remains alive, being a member of forty-two years' standing. Likewise of the 2 members who entered on the forty-third year of membership, 1 died in that year, and the other passed on to the forty-fourth year of membership, and died. It hence appears that the whole 684 members elected have, up to the present time, passed through 8,316 years of observation, or about 12 years to each member; but this must not be confounded with the average period of membership, for the above result is derived from observations on a large number but recently elected; the correct average duration of membership will hereafter appear. The average rate of mortality in this table will be found to coincide with that of Table A, being 1·225 per cent., but an inspection of the last column shows that as the period of membership increases, or, in other words, as age advances, there is a marked increase in the rate of mortality. The following is a brief abstract of these results:—

Abstract III.

Years in the Society.	Number Exposed to Risk of Mortality.	Died.	Mortality per Cent.
1 to 4.....	2198	9	0·409
5 ,, 9.....	2190·5	14	0·639
10 ,, 14.....	1353·5	20	1·477
15 ,, 19.....	811·5	11	1·355
20 ,, 24.....	578·5	8	1·383
25 ,, 29.....	410	17	4·146
30 ,, 34.....	200	7	3·500
35 ,, 39.....	74	6	8·108
40 ,, 44.....	18	4	2·222
Total.....	7834	96	1·225

Assuming that the average age of admission of members will range from 25 to 35 years of age, although, perhaps, it may be more strictly stated to range between 25 and 30, an inspection of the above figures will show that at the younger ages the mortality is much under the average of the population generally, but at the older and more advanced ages greater.

The next Table, D,† is similar in arrangement to Table C, only showing in the final column, instead of the rate of mortality, the ratio per cent., as in Table B, of withdrawals from the society from all

* See page 219.

† See page 220.

causes, including death, and here, as in the preceding table, the causes of withdrawal will be found to increase with the period of membership.

The following is a condensed abstract of Table D :—

ABSTRACT IV.

Years in the Society.	Number Exposed to Risk of Withdrawal.	Died, Resigned, Ceased to Pay, and Ejected.	Per Centage of Total Withdrawals.
1 to 4.....	2,226	65	2·920
5 ,, 9.....	2,243	119	5·305
10 ,, 14.....	1,376	65	4·724
15 ,, 19.....	828	44	5·314
20 ,, 24.....	586	23	3·925
25 ,, 29.....	417	31	7·434
30 ,, 34.....	204	15	7·353
35 ,, 39.....	76	10	13·158
40 ,, 44.....	18	4	22·222
Total....	7,974	376	4·715

From the results of this abstract, Table E* has been constructed so as to exhibit in an interesting manner the chances and average duration of membership as deduced from the experience of the Royal Medical-Chirurgical Society, from its establishment, in the year 1805, up to the present time.

This table has been compiled from the results set forth in the last column of Abstract IV, in the same manner in which Table VI, preceding, was constructed from the figures given in Abstract E, only that, in the former case, third differences were used in the interpolations, but in the later instances, second differences only (see paper on the Mortality of Master Mariners, in vol. xiii. of the *Journal of the Statistical Society*).

Assuming that 100,000 members, or any submultiple by ten of that number, entered the Society, column 4 will show the numbers remaining in the Society in each succeeding year, and column 5 will show the number of members withdrawing from all causes. Hence, of 100,000 members, 1,920 would withdraw in the first year of membership, or of 1,000 entering, 19 would withdraw. Again, of 1,000 members elected into the Society, 516 would enter on the fifteenth year of membership, and 486 on their sixteenth year, or, in other words, the equation of membership, or what is technically of almost the same value for the present purpose, the expectation of membership when just elected is about fifteen and a half years. If the experience of this Society can be taken as any criterion of that of other learned societies, this result deduced from the preceding table would be of some practical importance in the regulation of the composition-money required in lieu of the annual subscriptions paid by members. Keeping in view the fact that the expectation of membership is about fifteen years, it is easy to determine the present value of a corresponding annuity. By the term "present value," is meant the single sum of money which,

* See page 221.

paid down, would, if invested at the same rate of interest as the annual subscriptions, meet precisely the same liabilities as they fall due. Assuming that the funds or composition paid in commutation of yearly subscriptions could be invested to yield 3 per cent. compound interest, the present value of the annuity equivalent to that dependent on the expectation of membership is about eleven years' purchase. But there is another view to be taken of this question. If the practice of receiving composition payments were permitted and generally adopted by the members, there can be no doubt that the withdrawals from the Society from other causes than death, or those specified in column 4 of Table D, would be very much reduced. Different societies will, no doubt, be variously affected by these causes, and this feature of Tables A, B, C, and D, has been principally introduced here in order to direct more general attention to the question.

It is, however, very curious and instructive to observe the rate of mortality developed in some of these latter tables, and particularly in Table C and Abstract III, as compared with the rate of mortality found to prevail among the medical officers of the Royal Army. The difference is certainly one of the most remarkable results yet deduced by any inquiry into Vital Statistics.

The following Abstract V shows that throughout the period of life 26-70, the mortality among the members of the Royal Medical and Chirurgical Society approximates very closely to that of the male population of England and Wales, being considerably less between ages 26—35, somewhat higher above 35 years of age, but in the whole term of life, varying from 26 to 70 years of age, the mortality differs but little, the actual number of deaths in the Society being 96, while that which would have taken place according to the mortality of England and Wales is 97·1.

ABSTRACT V.

Mortality among the Members of the Royal Medical and Chirurgical Society.

Ages.	Number Exposed to Risk.	Mortality Per Cent.	Deaths		England and Wales.		
			At each Term of Life.	Total.	Mortality Per Cent.	Deaths that would have happened at each time of Life.	Total.
26 to 30	2198·0	0·409	9	....	0·998	21·9	....
31 ,, 35	2190·5	0·639	14	23	1·063	23·3	45·2
36 ,, 40	1353·5	1·477	20	43	1·157	15·7	60·9
41 ,, 45	811·5	1·355	11	54	1·319	10·7	71·6
46 ,, 50	578·5	1·383	8	62	1·560	9·0	80·6
51 ,, 55	410·0	4·146	17	79	1·935	7·9	88·5
56 ,, 60	200·0	3·500	7	86	2·529	5·1	93·6
61 ,, 65	74·0	8·108	6	92	3·474	2·6	96·2
66 ,, 70	18·0	2·222	4	96	4·947	0·9	97·1
	7834·0	1·225	96	....	1·239	97·1	....

TABLE A.

Year of Entry. (1)	Number Entered. (2)	Number under Observation from Year preceding. (3)	Total Number under Observation in each Year. (4)	Died. (5)	Resigned, Ceased to Pay, and Ejected. (6)	Total gone off. (7)	Half of Entered. Half of Discontinued. Entered (8)	Discontinued. (9)	Total. (10)	Number Exposed to Risk of Mortality. (11)	Mortality per Cent. (12)
1805....	60	....	60	....	....	....	30	....	30	30	
1806...	7	60	67	....	....	....	3·5	....	3·5	63·5	
1807..	2	67	69	1	....	....	1	....	1	303 68	0·330
1808....	3	69	72	....	1	1	1·5	·5	2	70	
1809...	2	71	73	1	1	2	1	·5	1·5	71·5	
1810...	9	71	80	....	....	....	4·5	....	4·5	75·5	
1811....	8	80	88	....	19	19	4	9·5	13·5	74·5	
1812...	9	69	78	....	....	....	4·5	....	4·5	410·5 73·5	0·000
1813...	15	78	93	....	1	1	7·5	·5	8	85	
1814...	22	92	114	....	2	2	11	1	12	102	
1815...	11	112	123	....	7	7	5·5	3·5	9	114	
1816...	23	116	139	1	2	3	11·5	1	12·5	126·5	
1817...	16	136	152	3	5	5	8	2·5	10·5	710 141·5	0·423
1818...	23	147	170	1	4	5	11·5	2	13·5	156·5	
1819..	18	165	183	1	5	6	9	2·5	11·5	171·5	
1820..	9	177	186	....	6	6	4·5	3	7·5	178·5	
1821...	13	180	193	2	9	11	6·5	4·5	11	182	
1822...	8	182	190	5	4	4	4	2	6	926 184	0·539
1823....	14	186	200	....	9	9	7	4·5	11·5	188·5	
1824...	13	191	204	3	9	12	6·5	4·5	11	193	
1825....	6	192	198	....	8	8	3	4	7	191	
1826..	6	190	196	1	3	4	3	1·5	4·5	191·5	
1827...	12	192	204	7 1	10	11	6	5	11	950 193	1·789
1828...	13	183	196	....	8	8	6·5	4	10·5	185·5	
1829...	8	188	196	5	6	11	4	3	7	189	
1830....	6	185	191	1	11	12	3	5·5	8·5	182·5	
1831...	....	179	179	7	19	26	....	9·5	9·5	169·5	
1832....	3	153	156	21 6	6	12	1·5	3	4·5	795·5 151·5	2·639
1833...	5	144	149	2	1	3	2·5	·5	3	146	
1834...	5	146	151	5	5	10	2·5	2·5	5	146	
1835...	24	141	165	1	2	3	12	1	13	152	
1836...	26	162	188	2	3	5	13	1·5	14·5	173·5	
1837....	21	183	204	9	4	4	10·5	2	12·5	933 191·5	0·965
1838...	11	200	211	3	5	8	5·5	2·5	8	203	
1839...	24	203	227	3	4	7	12	2	14	213	
1840...	21	220	241	3	7	10	10·5	3·5	14	227	
1841..	24	231	255	1	5	6	12	2·5	14·5	240·5	
1842....	20	249	269	14 3	4	7	10	2	12	1278·5 257	1·095
1843...	24	262	286	5	7	12	12	3·5	15·5	270·5	
1844..	30	274	304	2	11	13	15	5·5	20·5	283·5	
1845...	20	291	311	7	11	18	10	5·5	15·5	295·5	
1846...	24	293	317	6	15	21	12	7·5	19·5	297·5	
1847...	29	296	325	26 3	13	16	14·5	6·5	21	1527·5 304	1·702
1848...	22	309	331	2	12	14	11	6	17	314	
1849..	15	327	332	8	16	24	7·5	8	15·5	316·5	
1850....	....	308	....	....	....	....	....	....	....	....	....
	684	....	8,316	96	280	376	342·0	140·0	482·0	7834·0	1·225

TABLE B.

Year of Entry. (1)	Number Entered. (2)	Number under Observation from Year preceding. (3)	Total Number under Observation in each Year. (4)	Died. (5)	Resigned, Ceased to Pay, and Ejected. (6)	Total gone off. (7)	Half of Entered. (8)	Number Exposed to Risk of Withdrawal from the Society from all causes, including Death. (9)	Per Centage of Total Withdrawals. (10)
1805	60	....	60	....	....	....	30	30	
1806	7	60	67	....	....	....	3·5	63·5	
1807	2	67	69	....	....	3	1	304 68	0·987
1808	3	69	72	....	1	1	1·5	70·5	
1809	2	71	73	1	1	2	1	72	
1810	9	71	80	....	....	....	4·5	75·5	
1811	8	80	88	....	19	19	4	84	
1812	9	69	78	....	....	22	4·5	421·5 73·5	5·219
1813	15	78	93	....	1	1	7·5	85·5	
1814	22	92	114	....	2	2	11	103	
1815	11	112	123	....	7	7	5·5	117·5	
1816	23	116	139	1	2	3	11·5	127·5	
1817	16	136	152	....	5	26 5	8	721·5 144	3·604
1818	23	147	170	1	4	5	11·5	158·5	
1819	18	165	183	1	5	6	9	174	
1820	9	177	186	....	6	6	4·5	181·5	
1821	13	180	193	2	9	11	6·5	186·5	
1822	8	182	190	....	4	42 4	4	944·5 186	4·447
1823	14	186	200	....	9	9	7	193	
1824	13	191	204	3	9	12	6·5	197·5	
1825	6	192	198	....	8	8	3	195	
1826	6	190	196	1	3	4	3	193	
1827	12	192	204	11	10	52 21	6	967·5 198	5·375
1828	13	183	196	..	8	8	6·5	189·5	
1829	8	188	196	5	6	11	4	192	
1830	6	185	191	1	11	12	3	188	
1831	....	179	179	7	19	26	....	179	
1832	3	153	156	6	6	63 12	1·5	816·5 154·5	7·716
1833	5	144	149	2	1	3	2·5	146·5	
1834	5	146	151	5	5	10	2·5	148·5	
1835	24	141	165	1	2	3	12	153	
1836	26	162	188	2	3	5	13	175	
1837	21	183	204	....	4	27 4	10·5	942 193·5	2·866
1838	11	200	211	3	5	8	5·5	205·5	
1839	24	203	227	3	4	7	12	215	
1840	21	220	241	3	7	10	10·5	230·5	
1841	24	231	255	1	5	6	12	243	
1842	20	249	269	3	4	48 7	10	1295·5 259	3·705
1843	24	262	286	5	7	12	12	274	
1844	30	274	304	2	11	13	15	289	
1845	20	291	311	7	11	18	10	301	
1846	24	293	317	6	15	21	12	305	
1847	29	296	325	3	13	93 16	14·5	1561 310·5	5·951
1848	22	309	331	2	12	14	11	320	
1849	15	327	332	8	16	24	7·5	324·5	
1850	....	308	....	....	....	....	....	....	....
	684	....	8,316	96	280	376	342·0	7974·0	4·715

TABLE C.

Rate of Mortality among the Members of the Royal Medical and Chirurgical Society.

Years in the Society. (1)	Number under Observation in each Year. (2)	Died. (3)	Discontinued. Resigned, Ceased to Pay, and Ejected. (4)	Alive. (5)	Total gone off (6)	Half of Discontinued. (7)	Number Exposed to Risk of Mortality. (8)	Mortality per Cent. (9)
1	684	1	....	15	16	....	342	
2	668	2	10	22	34	5	663	
3	634	9 2	25	25	52	12·5	2193 621·5	0·409
4	582	4	21	19	44	10·5	571·5	
5	538	7	20	12	39	10	528	
6	499	3	25	24	52	12·5	2190·5 486·5	
7	447	14 1	36	14	51	18	429	0·639
8	396	3	15	15	33	7·5	388·5	
9	363	....	9	22	31	4·5	358·5	
10	332	2	13	15	30	6·5	325·5	
11	302	5	6	19	30	3	299	
12	272	20 6	12	6	24	6	1353·5 266	1·477
13	248	2	10	14	26	5	243	
14	222	5	4	11	20	2	220	
15	202	5	11	13	29	5·5	196·5	
16	173	1	8	2	11	4	811·5 169	
17	162	11 3	7	3	13	3·5	158·5	1·355
18	149	....	4	3	7	2	147	
19	142	2	3	....	5	1·5	140·5	
20	137	4	8	2	14	4	133	
21	123	1	4	4	9	2	121	
22	114	8	1	3	4	·5	578·5 113·5	1·383
23	110	3	2	3	8	1	109	
24	102	....	....	1	1	....	102	
25	101	2	2	1	5	1	100	
26	96	6	2	6	14	1	95	
27	82	17 6	1	2	9	·5	410 81·5	4·146
28	73	1	5	2	8	2·5	70·5	
29	65	2	4	2	8	2	63	
30	57	5	2	2	9	1	56	
31	48	....	4	7	11	2	46	
32	37	7	1	4	5	·5	200 36·5	3·500
33	32	1	....	1	2	....	32	
34	30	1	1	1	3	·5	29·5	
35	27	2	....	1	3	....	27	
36	24	6 4	3	7	14	1·5	22·5	
37	10	....	....	2	2	....	74 10	8·108
38	8	....	1	....	1	·5	7·5	
39	7	....	....	1	1	....	7	
40	6	....	....	1	1	....	6	
41	5	1	....	....	1	....	5	
42	4	4 1	....	1	2	....	18 4	2·222
43	2	1	..	....	1	....	2	
44	1	1	....	....	1	....	1	
	8,316	96	280	308	684	140·0	7834·0	1·225

TABLE D.

Duration of Membership in the Royal Medical and Chirurgical Society.

Years in the Society. (1)	Number under Observation in each Year. (2)	Died. (3)	Resigned, Ceased to Pay, and Ejected. (4)	Total. (5)	Alive. (6)	Total gone off. (7)	Number Exposed to Risk of Withdrawal from the Society from all causes, including Death. (8)	Per Centage of Total With-drawals. (9)
1	684	1	....	1	15	16	342	
2	668	2	10	12	22	34	668	
3	634	2	25	27	25	52	634	
4	582	4	21	25	19	44	582	
				65			2,226	2·920
5	538	7	20	27	12	39	538	
6	499	3	25	28	24	52	499	
7	447	1	36	37	14	51	447	
8	396	3	15	18	15	33	396	
9	363	....	9	9	22	31	363	
				119			2,243	5·305
10	332	2	13	15	15	30	332	
11	302	5	6	11	19	30	302	
12	272	6	12	18	6	24	272	
13	248	2	10	12	14	26	248	
14	222	5	4	9	11	20	222	
				65			1,376	4·724
15	202	5	11	16	13	29	202	
16	173	1	8	9	2	11	173	
17	162	3	7	10	3	13	162	
18	149	....	4	4	3	7	149	
19	142	2	3	5	....	5	142	
				44			828	5·314
20	137	4	8	12	2	14	137	
21	123	1	4	5	4	9	123	
22	114	....	1	1	3	4	114	
23	110	3	2	5	3	8	110	
24	102	....	....	....	1	1	102	
				23			586	3·925
25	101	2	2	4	1	5	101	
26	96	6	2	8	6	14	96	
27	82	6	1	7	2	9	82	
28	73	1	5	6	2	8	73	
29	65	2	4	6	2	8	65	
				31			417	7·434
30	57	5	2	7	2	9	57	
31	48	....	4	4	7	11	48	
32	37	....	1	1	4	5	37	
33	32	1	....	1	1	2	32	
34	30	1	1	2	1	3	30	
				15			204	7·353
35	27	2	....	2	1	3	27	
36	24	4	3	7	7	14	24	
37	10	....	....	....	2	2	10	
38	8	....	1	1	....	1	8	
39	7	....	....	....	1	1	7	
				10			76	13·158
40	6	....	....	....	1	1	6	
41	5	1	....	1	....	1	5	
42	4	1	....	1	1	2	4	
43	2	1	....	1	....	1	2	
44	1	1	....	1	....	1	1	
				4			18	22·222
	8·316	96	280	376	308	684	7,974	4·715

Table E.

Decrements of Membership in the Royal Medical and Chirurgical Society of London.

Years.	Per Centage $= d$.	$\lambda \cdot a$ $\lambda \cdot 1 - \frac{d}{100} = c$ $d + \Sigma(c) = \lambda \cdot a$.	Number of Members in the Society at the beginning of each Year from the Date of Admission $= a$.	Decrements $= \delta$.	Years.	Per Centage $= d$.	$\lambda \cdot a$ $\lambda \cdot 1 - \frac{d}{100} = c$ $d + \Sigma(c) = \lambda \cdot a$.	Number of Members in the Society at the beginning of each Year from the Date of Admission $= a$.	Decrements $= \delta$.
		5·0000000	100,000	1,920			4·5575004	36,099	1,416
1....	1·920	9·9915835			22....	3·925	9·9826104		
		4·9915805	98,080	2,864			·5401108	34,683	1,863
2....	2·920	·9871298			23....	5·369	·9760334		
		·9787103	95,216	3,650			·5161442	32,820	2,089
3....	3·833	·9830261			24....	6·366	·9714336		
		·9617364	91,566	4,115			·4875778	30,731	2,149
4....	4·495	·9800261			25....	6·992	·9685203		
		·9417625	87,451	4,320			·4560981	28,582	2,093
5....	4·939	·9780024			26....	7·323	·9669720		
		·9197649	83,131	4,321			·4230701	26,489	1,969
6....	5·198	·9768175			27....	7·434	·9664515		
		·8965824	78,810	4,181			·3895216	24,520	1,734
7....	5·305	·9763270			28....	7·073	·9681419		
		·8729094	74,629	3,915			·3576635	22,786	1,564
8....	5·246	·9765976			29....	6·863	·9691222		
		·8495070	70,714	3,630			·3267857	21,222	1,449
9....	5·134	·9771106			30....	6·826	·9692947		
		·8266176	67,084	3,349			·2960804	19,773	1,380
10....	4·992	·9777602			31....	6·982	·9685670		
		·8043778	63,735	3,089			·2646474	18,393	1,353
11....	4·847	·9784225			32....	7·353	·9668314		
		·7828003	60,646	2,865			·2314788	17,040	1,319
12....	4·724	·9789835			33....	7·740	·9650135		
		·7617838	57,781	3,080			·1964923	15,721	1,326
13....	5·330	·9762124			34....	8·438	·9617153		
		·7379962	54,701	3,084			·1582076	14,395	1,341
14....	5·638	·9747971			35....	9·523	·9575382		
		·7127933	51,617	2,943			·1157458	13,054	1,445
15....	5·701	·9745071			36....	11·071	·9490434		
		·6873004	48,674	2,713			·0647892	11,609	1,528
16....	5·574	·9750916			37....	13·158	·9387298		
		·6623920	45,961	2,442			·0035190	10,081	1,474
17....	5·314	·9762858			38....	14·626	·9313256		
		·6386778	43,519	2,202			3·9348446	8,607	1,398
18....	5·060	·9774492			39....	16·244	·9230159		
		·6161270	41,317	1,953			·8578605	7,209	1,300
19....	4·727	·9789698			40....	18·036	·9136231		
		·5950968	39,364	1,725			·7714836	5,909	1,183
20....	4·381	·9805442			41....	20·020	·9029814		
		4·5756410	37,639	1,540			·6744650	4,726	1,050
21....	4·091	9·9818594			42....	22·222	9·8908568		
							3·5653218	3,676	908

In vol. ix. of the Journal of this Society will be found an interesting paper by Dr. Guy, "On the Duration of Life in several Professions," distinguishing, among others, the Medical Profession. The results arrived at by Dr. Guy show a somewhat greater mortality than that for the male population generally of this country. There is also before the public the well-known body of facts collected by Professor Casper, of Berlin, and which exhibits a higher rate of mortality than even the results of Dr. Guy's paper; but it is only right to bear in mind that, however valuable these contributions may be considered, both collections of facts are defective in one very important element, namely, the number of medical men in the profession or class in which the deaths are recorded. Neither Dr. Guy nor Professor Casper had the means of ascertaining the amount of population in the respective groups in which the deaths recorded took place; but, under circumstances, they have made the best possible use of the materials at their command. In the facts brought forward in this paper, however, it will be seen that the number of the living, both in the officers of the Medical Department of the Royal Army and among the Members of the Royal Medical-Chirurgical Society, is known, and therefore all the elements necessary to a complete inquiry into the duration of life in each of these classes are available. It could also be easily shown that the effect of introducing the wanting element in Dr. Guy's inquiry would be to increase the duration of life assigned to the results he has arrived at, and thereby make the rate of mortality approximate more closely to those set forth in Abstracts III and V, preceding.

It is very satisfactory to find so near an agreement in the results of two independent inquiries, originating in so different a manner, and resting on so very different sources of information. But this coincidence only makes the results of the investigation into the duration of life among the officers of the Medical Department of the Army, as brought forward in the early part of this paper, the more remarkable and extraordinary.

It will be observed, that although a very complete analysis has been made of the social condition of life of the medical officers of the Army, in order to arrive at the rate of mortality peculiar to those conditions, still no attempt has been made to determine the physical causes which it is evident prevail so powerfully in producing differences of mortality of so striking a nature as to be wholly without precedent in all former inquiries in the diversified field of Vital Statistics. It is proposed to reserve this more generally interesting part of the investigation for a future occasion.

On the Effect of the Remission of Taxes on the Revenue in the Thirty Years from 1822 *to* 1851 *inclusive.* Communicated by Dr. Guy.

[Read before the Statistical Society of London, 21st June, 1852.]

In a former communication,* the immediate effect on the Revenue, of the Remission of Taxes during the period of thirty-seven years, from 1815 to 1851, was considered. In this communication it is proposed to examine the gross effect of those reductions in different terms of years, for the shorter period, from 1822 to 1851 inclusive, a period embraced in Mr. Cardwell's Parliamentary Return, headed "Public Income and Expenditure, &c.," dated March 16th, 1852. The three columns of the following table are extracted or compiled from that Return :—

Table I.

Year.	Ordinary Revenue.	Excess of Taxes Reduced or Repealed.	Year.	Ordinary Revenue.	Excess of Taxes Reduced or Repealed.
1822.....	53,652,473	2,123,963	1837.....	46,199,190	396*
1823.....	51,508,376	4,090,893	1838.....	47,104,745	8,134*
1824.....	52,202,018	1,744,633	1839.....	47,688,910	56,308†
1825.....	52,065,390	3,256,869	1840.....	47,351,563	1,032,270*
1826.....	49,625,485	1,670,329	1841.....	47,917,521	21,382†
1827.....	49,581,576	60,278	1842.....	46,700,890	4,026,952*
1828.....	51,665,077	35,279	1843.....	51,069,978	366,453†
1829.....	50,428,275	115,450†	1844.....	53,317,092	426,089†
1830.....	49,889,994	3,292,630	1845.....	51,719,118	4,522,586
1831.....	46,293,646	930,071	1846.....	52,950,202	1,149,790
1832.....	46,833,796	540,290	1847.....	51,340,801	343,211†
1833.....	46,170,600	1,460,043†	1848.....	52,422,338	578,896†
1834.....	46,425,263	1,789,411	1849.....	52,310,768	384,584†
1835.....	45,893,369	157,377	1850.....	52,177,141	1,307,073†
1836.....	48,591,180	943,980†	1851.....	51,669,553	2,379,864

In the third column, headed "Excess of Taxes, Reduced or Repealed," certain years are distinguished by marks. The asterisk (*) designates those exceptional years in which the taxes increased, or newly imposed, exceeded the taxes reduced, or repealed; and the mark (†) distinguishes those years in which taxes were reduced or repealed, without any countervailing augmentation.† The columns in this table, in fact, are the same as the first, second, and fifth columns of the table contained in the former communication.

From these data the following tabular summary of the effects of the remission of taxes on the revenue for periods of five, ten, fifteen, and thirty years has been compiled :—

* *Journal of the Statistical Society*, June, 1852.

† The explanation of this mark, at p. 151 of the last number of the Journal, should be corrected, so as to correspond with the explanation now given.

TABLE II.

	Revenue in First Year of the Series.	Revenue in Last Year of the Series.	Increase or Decrease.	Excess of Taxes Reduced or Repealed.	Gain to the Nation.
Periods of Five Years.					
1822 to 1826.....	53,652,473	49,625,485	−4,026,988	12,886,687	8,859,699
1827 ,, 1831.....	49,581,576	46,293,646	−3,287,930	4,433,708	1,145,778
1832 ,, 1836.....	46,833,796	48,591,180	+1,757,384	4,891,101	6,648,485
1837 ,, 1841.....	46,199,190	47,917,521	+1,718,331	963,110*	755,221
1842 ,, 1846.....	46,700,890	52,950,202	+6,249,312	2,437,966	8,687,278
1847 ,, 1851.....	51,340,801	51,669,553	+ 328,752	4,993,628	5,322,380
Periods of Ten Years.					
1822 to 1831.....	53,652,473	46,293,646	−7,358,827	17,320,395	9,961,568
1832 ,, 1841.....	46,833,796	47,917,521	+1,083,725	3,927,991	5,011,716
1842 ,, 1851.....	46,700,890	51,669,553	+4,968,663	7,431,594	12,400,257
Periods of Fifteen Years.					
1822 to 1836.....	53,652,473	48,591,180	−5,061,293	22,211,496	17,150,203
1837 ,, 1851.....	46,199,190	51,669,553	+5,470,363	6,468,484	11,938,847
Period of Thirty Years.					
1822 to 1851.....	53,652,473	51,669,553	−1,982,920	28,679,980	26,697,060

This table shows, in successive columns, the revenue in the first and in the last years of the several series of years; the increase or decrease of the revenue, distinguished by the signs + or −; and the excess of taxes reduced or repealed. The asterisk, in the fourth line of this last-mentioned column, indicates an exceptional period of five years (from 1837 to 1841,) in which the taxes increased or newly imposed exceeded the taxes reduced or repealed. To these columns a column is added with the heading, "Gain to the Nation." The figures in this column are obtained by adding to, or subtracting from, the excess of taxes reduced or repealed, the increase or falling off in the revenue for each of the several periods comprised in the table. In the exceptional period, 1837 to 1841, the amount in the column headed "Gain to the Nation," is the difference between the sum of 1,718,331*l.*, which expresses the gain to the revenue in that interval of time, and 963,110*l.*, the excess of taxes increased or newly imposed. "The Gain to the Nation" is, therefore, intended to mean the twofold advantage which, in decided periods of prosperity, consists in a concurrent remission of taxes and increase of revenue; and, in less prosperous periods, the balance left by deducting a falling off in the revenue from the sum of taxes reduced or remitted, in excess of those increased or newly imposed; or, by subtracting an excess of taxes, increased or newly imposed, from the realized increase in the revenue.

From this table it appears that the financial operations of the last thirty years have been more or less successful, even when tested by the results obtained for short periods of years. Of the six quinquennial periods, from 1822 to 1851 inclusive, there is not one which does not show a balance of gain to the nation. Even in the least favourable of these

periods, (viz., the quinquennial period from 1837 to 1841,) the addition made to the taxation of the country was not only realised, but left a balance in favour of the revenue of 755,221*l.* From the column headed "Excess of Taxes Reduced or Repealed," we learn that, with one exception, there has been no quinquennial period since 1822, in which a very considerable remission of taxes has not taken place; and that the aggregate of the several amounts representing the excess of the taxes reduced or repealed reaches the very large sum of 28,679,980*l.*—a reduction of public burdens effected at the sacrifice of only 1,982,920*l.* of revenue.

But it must be obvious that in thus calculating the gain to the nation from the financial operations of the last thirty years, an important element of all such calculations has been omitted, for no notice whatever is taken of the increase of population which took place in those thirty years. It is well known that this increase of population has amounted to nearly 50 per cent., and even for the shorter periods, comprised in the table, an addition has been made to our numbers too considerable to be omitted from the calculation of gain or loss to the nation. This being the case, another table (Table III.) has been prepared, in which this element of the calculation is taken into the account.

The first column of this table gives the revenue in the first year of the several series, the second the gain to the nation, as calculated in Table II, and the third column shows the sum of these two amounts. The fourth column consists of a series of calculations showing the amounts which the revenue would have attained at the end of each period, if it had increased with the increase of the population, if no remission of duties had taken place, and on the assumption that the retention of duties did not injuriously affect the revenue. The last column of the table gives the difference between the two preceding columns, the mark (+) indicating an amount of gain to the nation in excess of that due to increase of population, the mark (−) showing a loss to the nation when the result of the financial operations of the period is compared with the increase of revenue which would have accompanied the increase of population. It is only necessary further to explain that in calculating the increased revenue due to increase of population, on the foregoing assumptions, it has been taken for granted that the rate of increase of the whole population of the United Kingdom, from which the revenue is derived, does not differ materially from the rate of increase of Great Britain; that the rate of increase in the ten years, 1822 to 1831 inclusive, 1832 to 1841 inclusive, and 1842 to 1851 inclusive, is the same as in the nearly corresponding periods of ten years which elapsed between one census and another; and, lastly, that the rate of increase of the population for the periods of five years was the half of the ascertained rate of increase in the decades of which they form a part. On these assumptions the rates of increase of the population in the several series of years comprised in the table will be as follows:—

1822 to 1826	7½ per cent.	1822 to 1831	15 per cent.
1827 ,, 1831	7½ ,,	1832 ,, 1841	14 ,,
1832 ,, 1836	7 ,,	1842 ,, 1851	12 ,,
1837 ,, 1841	7 ,,	1822 ,, 1836	22 ,,
1842 ,, 1846	6 ,,	1837 ,, 1851	19 ,,
1847 ,, 1851	6 ,,	1822 ,, 1851	47 ,,

TABLE III.

	Revenue in First Year of the Series. A.	Gain to the Nation. B.	Sum of A and B.	Calculated Revenue in Last Year of Series, supposing an Increase equal to the Increase of Population, and no Remission of Duties.	Gain or Loss to the Nation corrected.
Periods of Five Years.					
1822 to 1826.....	53,652,473	8,859,699	62,512,172	57,676,408	+4,835,764
1827 ,, 1831.....	49,581,576	1,145,778	50,727,354	53,300,194	−2,572,840
1832 ,, 1836.....	46,833,796	6,648,485	53,482,281	50,112,162	+3,370,119
1837 ,, 1841.....	46,199,190	755,221	46,954,411	49,433,133	−2,478,722
1842 ,, 1846.....	46,700,890	8,687,278	55,388,168	49,502,943	+5,885,225
1847 ,, 1851.....	51,340,801	5,322,380	56,663,181	54,421,249	+2,241,932
Periods of Ten Years.					
1822 to 1831.....	53,652,473	9,961,568	63,614,041	61,700,344	+1,913,697
1832 ,, 1841.....	46,833,796	5,011,716	51,845,512	53,390,527	−1,545,015
1842 ,, 1851.....	46,700,890	12,400,257	59,101,147	52,304,997	+6,796,150
Periods of Fifteen Years.					
1822 to 1836.....	53,652,473	17,150,203	70,802,676	65,456,017	+5,346,659
1837 ,, 1851.....	46,199,190	11,938,847	58,138,037	54,977,036	+3,161,001
Period of Thirty Years.					
1822 ,, 1851.....	53,652,473	26,697,060	80,349,533	78,869,135	+1,480,398

It results, from a careful examination of this table, that the issue of the financial operations of the last thirty years was as follows:—

1. Of the six quinquennial periods included in the last thirty years, two present a financial result less favourable than that due to mere increase of population, while the other four quinquennial periods show a financial result greatly exceeding that due to increase of population.
2. Of the three periods of ten years one presents a financial result less favourable, and two more favourable, than the results due to mere increase of population.
3. The two periods of fifteen years agree in presenting a financial result more favourable than can be explained by increase of population.
4. In the thirty years, from 1822 to 1851 inclusive, the nation has gained nearly a million and a half of money over and above that which would be accounted for by mere increase of population.

As the process of reasoning which has been employed in this communication will be better understood by means of an example, in

which every step of the reasoning is clearly set forth, the whole period of thirty years is selected for that purpose.

	£
In the thirty years, from 1822 to 1851 inclusive, taxes were reduced or repealed in excess of taxes increased or newly imposed to the amount of	28,679,980
Now the ordinary revenue in 1822 was	53,652,473
And in 1851	51,669,553
Being a falling off, in 1851, compared with 1822, of	1,982,920
If now we deduct from	28,679,980
The amount of falling off in 1851, namely	1,982,920
We have taxes repealed, without injury to the revenue, to the amount of	26,697,060
Or, for each year of the thirty years, taking one year with another, we have taxes repealed, without injury to the revenue, to the amount of....	889,902
Now if we add to the amount of the ordinary revenue in 1822, namely....	53,652,473
The excess of duties remitted or reduced, namely	28,679,980
And subtract from this total, namely	82,332,453
The difference between the revenue in 1822 and 1851, namely	1,982,920
We obtain, as a total of revenue in 1851, supposing no remission of taxes to have taken place, and the yield of the revenue to have been unaffected by the taxes retained	80,349,533
But the revenue, if it had increased only as the population of Great Britain increased (viz. 47 per cent.) ought, on the above suppositions, to have been	53,652,473
Added to 47 per cent., namely	25,216,663
Giving, as the revenue in 1851, on the foregoing suppositions	78,869,135
So that the revenue in the thirty years, 1822 to 1851 inclusive, would have been augmented (on the foregoing suppositions,) beyond the increase due to growth of population, by the difference between that increase, namely	78,869,135
And the actual increase	80,349,533
Namely	1,480,398
This will give an annual increase of	49,346

If the revenue is correctly assumed to furnish a measure of the prosperity of the nation, a sum of about 50,000*l.* per annum multiplied by the average number of units out of which one finds its way to the exchequer, ought to represent the progress which the nation has made during the last thirty years. If, for example, it were true that out of every ten shillings spent by each inhabitant in the course of a year one shilling found its way to the exchequer, then it would be fair to presume that the wealth of the country (measured by the sum annually expended,) increased at the rate of about 500,000*l.* per annum.

On the Population of the Colony of British Guiana, as enumerated on the 31st of March, 1851. Being the substance of a Despatch from Governor Barkly, presented to the Society by the Right Hon. Earl Grey, *Her Majesty's late Secretary of State for the Colonies.*

[Read before the Statistical Society of London, 21st June, 1852.]

As a preface to this paper, we append the following description of this distant and extensive dependency, taken from the last edition of McCulloch's Geographical Dictionary.

British Guiana is the most westerly portion of an extensive region of South America, known under the name of Guiana, and extends between latitude 0° 40′ and 8° 40′ north, and between the 57th and 61st degree of west longitude, having east, Dutch Guiana, from which it is separated by the Corentyn; south, Brazil; west, Venezuela; and north and north-east, the Atlantic. This territory is supposed to comprise about 76,000 square miles, but of this a disputed portion claimed by Brazil and Venezuela, amounts to not less than 64,000 square miles, leaving only about 12,000 square miles for the area of the undisputed British territory. The latter has the Corentyn on the east, and the Essequibo on the west. Its subdivisions, population, &c. are as follows:—

Counties.	Population (1834).				Chief Towns.
	Whites.	Free Coloured.	Apprentices.	Total.	
Demerara .... } Essequibo .... }	3,006	6,360	65,556	74,992	Georgetown.
Berbice	570	1,651	19,359	21,589	New Amsterdam.
Total....	3,576	8,011	84,915	96,581	

Mr. Schomburgk estimates the present population (1840) at 98,000, exclusive of 17,000 aborigines.

Physical Geography.—An alluvial flat extends from the coast inland, with a breadth varying from about 10 to 40 miles, terminating at the foot of a range of sand-hills from 30 to 120 feet high. Parallel with this range run several detached groups of hills, seldom more than 200 feet high, which cross the Essequibo in latitude 6° 15′, being continuous with the Sierra Imataca in Venezuela. About latitude 5° a mountain-chain, composed of granite, gneiss, and other primitive rocks, an offset of the Orinoco mountains, runs west to east through Guiana, forming large cataracts where it is crossed by the bed of the rivers, and rising frequently to the height of 1,000 feet above the ocean. About a degree farther south are the Pacaraima mountains, which, in a similar manner, run west and east, and are of primitive formation. This chain forms many rapids and cataracts in the larger rivers, and contains the sources of several rivers of secondary importance, including the Berbice and Massaroony. Its highest point, mount Roraima, latitude 5° 9′ 30″ north, longitude 60° 47′ west, near the

western extremity of the territory claimed by the British, is 7,500 feet high. The Conocou or Canucu chain, running south-east, connects the Pacaraima with the Sierra Acarai. The latter is a densely wooded chain of mountains, forming the southern boundary of Guiana, and the watershed between the basins of the Amazon and Essequibo. Mr. Schomburgk estimated the elevation of the highest summits of this chain at 4,000 feet. The Essequibo and Corentyn rise in it.

"The whole surface of the coast lands of British Guiana is on a level with the high water of the sea. When these lands are drained, banked, and cultivated, they consolidate and become fully a foot below it. It requires, therefore, unremitting attention to the dams and sluices, to keep out the sea, one inundation of which destroys a sugar-estate for 18 months, and a coffee one for six years. The original cost of damming and cultivating is fully paid by the first crop, and the duration of the crops is from 30 to 50 years; so that, though great capital is required for the first outlay, the comparative expense of cultivation is a mere trifle compared with that of the [West Indian] islands, notwithstanding that the expense of works, buildings, and machinery, may be treble or quadruple, being built on an adequate scale for half a century of certain production." (*Hilhouse on the Warow Land, &c. Geographical Journal*, iv, 323.)

Between the first and second chains of hills are some extensive savannahs, which approach the sea-shore east of the river Berbice. South of the Pacaraima chain and the Rupunoony are others still more extensive, but not so well watered. In the latter region are situated the small lake of Amucu, and the frontier settlement of Pirara. With the exception of these savannahs, and the swamps on the Berbice, the interior is mostly covered with hill-ranges and dense forests.

The greatest slope of the country is towards the north, in which direction run the principal rivers. The chief of these is the Essequibo, which rises in the Sierra Acarai, about 40 miles north of the equator, and discharges itself into the ocean by an estuary nearly 20 miles wide, after a course of at least 620 miles. Its entrance is much impeded by shoals, and it is navigable for sailing-vessels for only about 50 miles from its mouth. According to the volume of water its current is more or less strong, but it is seldom more than four knots an hour even during the rainy season. The Corentyn rises about latitude 1° 30′, and longitude 57°, and discharges itself also by an estuary 20 miles wide. Between these two rivers run the Berbice and Demerara; the former may be ascended for 165 miles by vessels drawing seven feet water; the latter is navigable for 85 miles above Georgetown, which is situated near its mouth. The Mazaruni, Cuyuni, &c., affluents of the Essequibo, are the other principal streams. All the large rivers bring down great quantities of detritus, which, being deposited around their mouths and estuaries, renders the whole coast shoal. For 12 or 15 miles seaward the mud bottom is covered by only 3 or 4 feet water.

Geology and Minerals.—These deposits around the coast rest upon deep strata of strong clay of different kinds, alternating with others of sand and beds of small shells; and these again with a granitic formation, which begins to appear on the surface in the second chain of mountains. The granite rocks in the interior often assume the most imposing and

singular forms; mural precipices, with cascades 1,400 or 1,500 feet high descending over them; granite boulders of huge size spread over extensive tracts, &c.; and in latitude 2° 55′ is a natural pyramid, called the *Ataraipu*, wooded to the height of 350 feet, and rising from that limit in naked grandeur to an elevation of about 900 feet. Mr. Schomburgk gives a sketch of this pyramid in the *Geographical Journal*, x, 163. The other chief rocks are porphyry, and various kinds of trap, gneiss, clay-slate, sandstone, coloured ochres, &c.: there is a total absence of limestone and its modifications. Traces of iron are frequent, but none of the precious metals have been discovered. Next to granite, excellent pipe and other clays are the most valuable mineral products.

Climate.—The mean temperature of the year at Georgetown is 81° 2′ Fahr.; the maximum 90°, the minimum 74° on the coast. Two wet and two dry seasons constitute the changes of the year. The great dry season begins towards the end of August, and continues to the end of November, after which showers of rain follow to the end of January; the short dry season then commences, terminating about the middle of April, when the rains begin to descend in torrents, and the rivers to inundate their banks. The winds, during the rains, are generally westerly; in the dry season they blow mostly from the ocean, particularly in the day-time. Hurricanes are unknown, gales unfrequent; thunder-storms occur at the changes of the seasons, but, like a few occasional shocks of earthquakes, are not attended with danger. The low and swampy coast lands are unhealthy, but the interior is quite otherwise; and the insalubrity of Georgetown, and other seaport towns, has been greatly aggravated by the quantity of refuse suffered to collect and decompose on the shore.

Vegetable Products.—The forests abound with trees of immense size, including the *mora excelsa*, sipari, or *green-heart* and many others yielding the most valuable timber, and an abundance of medicinal plants, dye-woods, and others of excellent quality for cabinet-making. Arnotto, so extensively used in the colouring of cheese, grows wild in profusion on the banks of the Upper Corentyn. That magnificent specimen of the American flora, the *Victoria regia*, was discovered by Mr. Schomburgk, on the banks of the Berbice (*Geographical Journal*). Another indigenous plant deserving of mention is the *haiarry*, a papilionaceous vine, the root of which contains a powerful narcotic, and is commonly used by the Indians, in poisoning waters to take the fish. The Indians beat the root with heavy sticks till it is in shreds like coarse hemp; they then infuse it, and throw the infusion over the area of the river or pool selected. In about twenty minutes every fish within its influence rises to the surface and is either taken by the hand or shot with arrows. A solid cubic foot of the root will poison an acre of water, and the fish are not thereby deteriorated.—*See Hilhouse, in Geographical Journal*, iv.

Wild Animals.—The jaguar, puma, peccari, and wild hog, tapir, many kinds of deer, &c., abound in Guiana; the sea-cow is met with in the larger rivers, which are also inhabited by the cayman, alligator, and guana. There are several kinds of formidable serpents, but they are fortunately of a sluggish and inactive nature. The birds have the most magnificent plumage. Turtles are plentiful. The rivers teem

with fish; the low-low, a species of *silurus*, often weighs from 200 to 300 lbs. The insect tribes are not excessively annoying.

Resources and Industry.—The property annually created by the products of the soil, trades, manufactures, &c., is estimated at 3,789,160*l.*; the value of the public and private property, movable and immovable, at 24,020,000*l.* The staples of the colony are at present sugar, coffee, and cotton; the two latter were formerly almost exclusively grown, but their culture is now in a great measure superseded by that of the sugar-cane.

The following is a statement of the quantities of the staple products raised in the colony from 1832 to 1838 inclusive:—

Articles.	1832.	1833.	1834.	1835.	1836.	1837.	1838.
Sugar (lbs.)..	96,381,959	99,106,827	81,085,483	107,586,405	107,806,249	99,851,195	88,664,885
Rum (gallons)	2,820,. 94	2,516,138	2,631,630	3,743,687	2,980,296	1,975,260	2,068,052
Molasses (do.)	4,502,. 73	5,121,301	3,288,586	3,105,421	4,035,569	3,405,906	3,132,675
Coffee (lbs.)..	6,410,535	4,490,596	3,035,556	3,065,742	5,875,732	4,066,200	3,143,543
Cotton (do.)..	1,157,709	954,957	926,944	867,942	656,902	803,200	641,920

The coast-regions are the only parts cultivated for sugar; but many tracts in the interior seem to be equally well fitted for that purpose; coffee, also, is grown only on the coast, but according to Mr. Schomburgk, no tract appears better suited for it than the central ridge of the mountains. The Indians have generally some indigenous cotton growing round their huts, and among the Macusis (on the Rupununi) it is raised to a considerable extent; it comes to perfection in most parts of the colony; but is cultivated by the colonists only on the coast, and even there it has of late been nearly abandoned, the planters being undersold by those of the United States. There are numerous other products, which as yet neither form articles of export nor of internal consumption, for which both the soil and climate are suitable, and which might be raised with advantage, were it not for the want of labour. Among these are rice, maize, Indian millet, Victoria wheat, cocoa, vanilla (a native of Guiana), tobacco, cinnamon, &c. Between the Berbice and Essequibo there is a tract of many thousand acres, possessing the means of constant irrigation, on a small portion of which three crops a year have been repeatedly raised; but at present it is nearly all a complete wilderness, and will so continue till labour becomes cheaper and more abundant. The coast-region, which is covered by a deep layer of vegetable mould, forming what is called a *pegass* soil, is so extremely fertile that 6000 and even 8000 lbs. of sugar, and from 20,000 to 30,000 lbs. of plantains, are sometimes produced on an acre; but, in order to cultivate this soil, dams and embankments, as before stated, are necessary; and agriculture is conducted at a great outlay, and on large estates.

Large herds of horses and cattle wander wild on the wide but ill-watered savannahs beyond the Pacaraima; and, with little exception, have hitherto afforded food only for beasts of prey. The savannahs between the Berbice and Demerara occupy upwards of 3,000 square

miles; they are clothed with nutritious grasses, plentifully irrigated, and interspersed with shady woods. Were these stocked with cattle from the interior, beef might be obtained as cheaply as in the United States. From 1,800 to 2,000 individuals, $\frac{7}{10}$ Indians, are employed in cutting timber, which is in great demand within the colony, though its export has hitherto been very trifling.

Since 1837, there has been a rapid decrease in the quantities of the staples grown and exported; the exports of 1839, as compared with those of 1836, presenting the enormous deficiency of nearly 1,150,000*l.*! Different circumstances have probably conspired to bring about this result, but there can be no manner of doubt that it is mainly ascribable to the nature of the climate, and the aversion of the emancipated negroes to severe labour. It is, indeed, not a little surprising, that any other result should have been anticipated from the emancipation. It was all but contradictory and absurd to suppose that people with few wants, occupying a soil of great natural fertility, lying under a burning sun, should voluntarily and heartily engage in labour, which is both severe and associated in their minds with the most degrading recollections. We believe, indeed, that it will be found wholly impossible, except under peculiar circumstances, to carry on the culture of sugar on its present plan in tropical countries, by the agency of *really* free labourers. Hayti, formerly the most important and productive of all the sugar-colonies, does not now produce a single pound weight of sugar; and such most probably would also be the case in Cuba and Brazil, were the blacks really free. In 1839, about 400 hill-coolies were imported from Hindostan into Guiana; and they are said to be quiet useful labourers. But it was suspected, and we believe with good reason, that this was, in effect, a revival of the slave trade; and the practice has in consequence been discontinued. At present, therefore, many thousand acres of the most fertile soil are lying waste for want of hands. Mr. Schomburgk reports that the number of abandoned estates in the Corentyn amounts to 58 out of 80! Manufactures can hardly be said to exist.

Commerce.—The following is an account of the quantities of the staple products of British Guiana, imported into the United Kingdom during each of the six years, ending with 1839:—

Articles.	1834.	1835.	1836.	1837.	1838.	1839.
Sugar (cwts.)	777,971	886,861	1,077,848	943,388	835,300	566,852
Rum (gallons)	1,334,970	1,990,656	2,004,588	1,482,129	1,508,946	1,442,550
Molasses (cwts.) ..	303,666	227,007	264,206	299,824	253,477	117,238
Coffee (lbs.)	2,527,648	3,166,091	3,467,442	5,118,642	3,799,298	1,673,232
Cotton (do.)	1,288,789	1,140,361	1,080,697	302,517	663,639	551,325
Arrowroot (do.) ..	6,548	9,973	10,009	1,204	6,723	255

The total value of the exports, which in 1836 amounted to 2,135,379*l.*, in 1839 amounted only to 986,013*l.* Nearly the whole are sent to Great Britain or to British America and the West Indies.

The value of the British and foreign goods imported during each of the five years, ending with 1836, was as follows:—

	1832.	1833.	1834.	1835.	1836.
	£	£	£	£	£
British	338,199	391,520	463,451	511,361	911,577
Foreign	234,996	166,054	390,177	103,745	292,983
Total.....	573,195	557,574	853,628	615,106	1,204,560

In 1836, 716 ships, of the burden of 111,425 tons, entered; and 728, of the burden of 116,005 tons, cleared out. There are at present 4 steamboats in the colony, the largest of 90 horse-power, plying between Georgetown and New Amsterdam. A railway from the capital to Mahaica has been projected. There are about 250 miles of public roads. Dutch and English measures, and Spanish, Dutch, and English money, are in use.

Government, &c.—The government is vested in a governor and a Court of Policy, consisting, besides the governor, of the chief justice, attorney-general, collector of the customs, and government secretary, and an equal number of unofficial persons elected from the colonists by the College of Electors. This College is a body of seven members, appointed by the inhabitants for life, whose qualification is the payment of taxes to the amount of 5*l.* sterling a year. The unofficial members of the Court of Policy serve for three years, and go out by rotation. There is a College of Financial Representatives of six members, with the same qualifications as the members of the College of Electors, chosen by the inhabitants for two years. The Court of Policy decides on all financial regulations; but when they have prepared an estimate of the expenses for the year, and the mode of taxation and the different items have been discussed and acceded to by a majority, the estimates are handed over to the financial representatives, who, in concert with the Court of Policy, examine the charges. In the combined court every member, whether of the Court of Policy or financial representatives, has an equal vote. The Court of Policy, combined with the financial representatives, having approved of and sanctioned the Ways and Means, they are passed into a law. The governor not only has a casting-vote, as president of the Court of Policy, but an absolute veto on all laws passed by a majority. The King in Council may enact or disallow any law passed in the colony. The supreme civil court consists of a chief judge, two puisne judges, a secretary, registrar, and accountant. It is a Court of Appeal from the Rolls Court in each county, in which one of the judges of the supreme court presides. The laws of Holland, but particularly the laws, statutes, and resolutions of the States General, are followed by the judges of the court in giving judgment. Appeal from the supreme court, in matters above 500*l.*, lies to the King in Council. The Supreme Criminal Court is composed of three civil judges, and three assessors, chosen by ballot. Its judgments are decided upon by a majority of votes, and are delivered in open court. Inferior criminal courts are holden by the sheriffs of each county, with whom three magistrates are asso-

ciated. Special magistrates appointed from England decide between the masters and labourers in the different districts; three superintendents of rivers, and six post-holders, are appointed for the protection of the Indians in the interior. There are, at present, eighteen ministers of the Church of England, two of that of Holland, five Roman Catholic, five of the Church of Scotland, and several of Protestant Dissenting sects. The provision for the different religious establishments in 1839 amounted to 22,942*l.* In 1838, 11,363 persons were receiving instruction in the public schools. The military force consists at present of one regiment of the line, and a detachment of another. The colonial militia has been disbanded.

The public revenue is derived from taxes on produce; on incomes of 500 dollars and upwards; on imports not of the origin or manufacture of Great Britain; and from assessed taxes on horses, carriages, wine and spirit licenses, &c. In 1836, it amounted altogether to 106,081*l.*, and the expenditure to 113,946. The portion of the 20 millions sterling falling to this colony, as compensation for the freedom of slaves, amounted to 4,268,809*l.*

The only towns worthy of mention are Georgetown and New Amsterdam. Georgetown, formerly Stabroek, the capital and seat of government, is on the east bank of the Demerara, near its mouth; latitude 6° 49′ 20″ north, longitude 58° 11′ 30″ west. Population about 20,000, of whom 16,000 are coloured (*Schomburgk*, p. 73). Except Water-street, which is built close to the river, the streets are wide and traversed by canals; the houses are of wood, seldom above two stories high, shaded by projecting roofs, having verandahs and porticos, and surrounded by gardens separated by trenches. An edifice facing the river, built of brick and stuccoed, which cost the colony upwards of 5,000*l.*, comprises all the government offices; near it are the Scotch church, market-house, and town guard-house. Within a mile of the town, near the mouth of the river, is Fort William Frederick, a small mud fort. A handsome gothic church, to cost 13,000*l.*, is now in course of erection at Georgetown; another Episcopal church stands on the parade-ground, besides which it has a Roman Catholic cathedral, Wesleyan chapel, three public, an infant, and eight private schools, a colonial hospital, an excellent seaman's hospital, a savings' bank, two commercial banks, and an amateur theatre. Shops and stores are numerous, and European goods of all kinds plentiful; no duty being laid on English merchandise. The markets are good, and a new market-house is being erected. New Amsterdam, on the Berbice, in latitude 6° 15′ north, longitude 57° 27′ west, extending about a mile and a half along the river, is intersected by canals, and has about 3,000 inhabitants. It has English, Scotch, and Dutch churches, Roman Catholic and Wesleyan chapels, a free school, courthouse, barracks, fort, many commodious wharfs and warehouses, and two commercial banks. It is less unhealthy than Georgetown.

History.—According to some, Columbus discovered Guiana in 1498; others give that honour to Vasco Nuñez, in 1504. The Dutch, who were its first European settlers, established some settlements near the Pomeroon, and elsewhere in its neighbourhood, in 1580; and several further to the east, a few years afterwards. The English began to form settlements about 1630. Most of Guiana, however, remained in

the hands of the Dutch, till 1796; when Demerara and Essequibo surrendered to the English. They were restored to the Batavian republic in 1802; and retaken by the British in 1803. The territory called British Guiana has belonged to us ever since that period; that called Dutch Guiana was given up to Holland at the conclusion of the late war.—*Schomburgk's British Guiana; Schomburgk, Hilhouse, &c., in Geographical Journal*, vols. ii. iii. iv. vi. vii. x.

Extract of a Dispatch from Governor Barkly to the Right Hon. Earl Grey, dated British Guiana, 28th November, 1851. *No.* 170.

1. I have the honour to transmit an abstract of the census of the population of this colony, taken on the 31st of March last, in pursuance of Ordinance No. 5, of the present year.

2. In this abstract, the returns for each of the three counties into which the colony is divided, and for the towns of Georgetown and New Amsterdam, are arranged in separate tables, and condensed in a general summary at the end, following as closely as practicable, for facility of comparison, the forms adopted in publishing the census of 1841;* but, in addition to the particulars then given as to the numbers, ages, and native countries of the inhabitants of these several divisions, information is now added as to their race, calling, religion, and proficiency in education.

3. On some of these points, the returns can only, I fear, be regarded as affording an approximation to the truth; indeed, from the immense extent of British Guiana, and from the irregular and wandering habits of no inconsiderable portion of its heterogeneous and widely scattered population, it was maintained by several leading members of the legislature, that authentic data for such returns could not be collected, and as the aggregate result falls short of popular anticipation, it will probably be looked at with no great confidence.

4. From the skill, however, with which the details were originally planned by Dr. Bonyun, the Acting Commissary of Population at the time Ordinance No. 5 of 1851 was passed, no less than from the zeal and intelligence with which his efforts were seconded by the Commissioners and their subordinates in each county, and also by many resident gentlemen qualified by local experience to aid the officers of Government in such a task; I am myself of opinion that there is every reason to conclude that the actual numerical statistics have been more carefully recorded than on any previous occasion, and that a tolerably correct picture of the population is on the whole presented.

5. The office of Commissary of Population having, as your Lordship is aware, been abolished, agreeably to a decision of the Combined Court, on the 30th of June last, I am indebted to the kind assistance of Mr. Pollard, the Acting Financial Accountant, for the supervision of the arrangement, and compilation of the returns in tabular form; and as from the same cause, I am deprived of the opportunity of forwarding a detailed official report, such as that from the late Mr. Wadfield, on the census of 1841, which accompanied Governor Light's dispatch, of 28th February, 1843, (No. 17,) I must request your Lordship to make allowance for my want of acquaintance with

* Vide Parliamentary Paper, No. 426, 30th June, 1845.

so difficult a subject, whilst I acquit myself of the duty of observing on the principal facts brought to light by the present census.

6. Two questions present themselves prominently, on considering any returns respecting the population of a country situated as this is:—First, in what ratio are the inhabitants, particularly the emancipated negroes, increasing from natural causes, that is to say, by excess of births over deaths?—Second, what permanent increase has been fictitiously created by immigration under the conditions on which it has been carried on.

7. I fear that on the first and most important of these points, the census tables are far from giving as definite and complete information as could be desired, the omission at the epoch of emancipation, and again in 1841, on political grounds, of any classification of the population, according to race or colour, rendering it impossible now to do more than estimate the natural increase of any particular class, proportionally to the aggregate natural increase of the whole population, which again, from the constant arrival and departure of immigrants in almost every year of the period, has been too fluctuating to furnish a basis for any computations pretending to exactitude. The ordinary checks, moreover, on such computations are here wanting, the endeavour to establish a registration of births, deaths, and marriages having hitherto, as frequently reported to your Lordship, proved a complete failure.

8. As far, however, as under such disadvantages an opinion can be formed, the progress of the settled population appears, I am happy to say, to have been less unsatisfactory during the last ten years, than was generally anticipated.

9. The late Commissary of Population, Mr. Hadfield, in an elaborate essay founded on the best data he could procure, estimated the annual increase at the very most at 1 per cent. per annum, a very low rate, indeed, in a country where land is so plentiful and subsistence so abundant; and only to be accounted for by an excessive mortality, consequent on the neglect of the very young and of the aged, by their more immediate connexions, an evil which, as has often been observed, grew out of the system of slavery.

10. From a comparison of the columns for "Natives of British Guiana," in the abstracts of 1841 and 1851, it will be seen that their numbers have increased, roundly speaking, from 65,000 to 86,000; but it would, of course, be unfair in such an inquiry to omit notice of the "Natives of Africa," imported before the Slave Trade was abolished, from whom these Creoles mainly derive their origin, so that 15,000 must be added in the first case, making the settled population, in 1841, 80,000, and 7,000 only in the second case; making that of 1851, 93,000, the increase being thus reduced to 13,000.

11. If, therefore, the population had remained unaffected, except by natural causes, an augmentation of 16 per cent. might have been assumed to have occurred during the decennial period, or much the same as that of the British Isles*; but, it must be borne in mind, that under the head of "Natives of British Guiana," are necessarily included all the children born in the country, not only of settled

* 1811, 15·11 per cent.; 1821, 14·12 per cent.; 1831, 14·91 per cent.—Porter's Progress, p. 11, vol. i.

African or European, but of immigrant parents; and that the increase ought therefore to be referred to a population which cannot, on an average (even omitting the coolies, on account of the extreme disproportion of the sexes among them,) have fallen short of 110,000.

12. This would give a ratio of increase, for all classes, of rather below 12 per cent. for a period, strictly speaking, of nine years and a half, (from 15th October, 1841, to 31st March, 1851,) or 1·263 per cent. per annum, against 1 per cent. per annum as estimated by Mr. Hadfield; and when it is remembered that in all probability the share of this increase pertaining to the Creole negroes, would, if it could be more closely analysed, prove somewhat larger than their strictly numerical proportion to the less acclimated races, there seems no reason to doubt that the emancipated population is steadily, if not rapidly, increasing. May it not, indeed, on the contrary, be fairly anticipated that, if proper regulations with respect to an assessment for medical aid be now established by the legislature, and more regard paid to sanitary precautions, the resources of this fine colony will, though for a time dependent on an influx of immigrants for their realization, be eventually developed by the labour of her own sons,—labour less costly and more suitable than any other quarter of the world could supply for that purpose. It will be seen, again, omitting the coolies from the comparison, that the equality of the sexes has scarcely been at all disturbed by the other immigration which has taken place. Among the surviving coolies, the males are to the females as 15 to 4, so that no large increase of population can be looked for from that source.

13. There is one section of the settled population to which I have not as yet specially adverted, although in strict justice it should rank first. I mean the aborigines. I am not aware how many "Bucks," as they are commonly called, were included in the census of 1841, as "Natives of British Guiana," but certainly fewer than the number recorded under that head in 1851, as settled in the cultivated portions of the colony, viz. 2,000. About 4,000 more reside, as stated in the note to page 60, on the sea-coast between the termination of cultivation in the river Pomeroon, and the mouth of the great Orinoco; fully one-half of them, however, in the territory claimed by the Republic of Venezuela, whilst it is estimated that at least 3,000 more migrate continually among the vast savannahs of the interior, within the limits of British Guiana, as laid down by Sir Robert Schomburgk.

14. The number in the vicinity of the cultivated portions of the colony has, by all accounts, very considerably decreased of late years, partly, no doubt, from the cessation of the presents which used to be distributed before the emancipation of the negroes, and which are still given by the Government of Dutch Guiana, partly from their dislike to negro-settlers, and partly from causes to which I shall presently allude. In the Pomeroon district, however, it appears from a careful investigation, made by the post-holder, that the Indian population has remained as nearly as possible stationary, during the last ten years, though it seems to me probable that this result is to be attributed mainly to a considerable influx of tribes anxious to obtain the protection which the British flag, or rather such respect as is paid by the

Venezuelans to the claims of the British Government, there affords them against the tyranny and exaction to which they are exposed in many parts of that republic.

15. The amount of labour contributed to the wealth of the colony, by the total number of Indians, is comparatively small, though the plantations on the Corentyn in Berbice, and those on the Arabisce coast of Essequibo, derive advantages occasionally from their services, especially in clearing land for cultivation; and the wood-cutting establishments on all the great rivers are aided by large gangs at irregular and uncertain intervals. Were middlemen, indeed, generally discarded, and confidence in a fair remuneration firmly established, it is probable this source of labour would become more readily available; but without wishing unduly to depreciate its value, I am not sanguine that the aborigines of British Guiana will ever become a stationary and civilized labouring population.

16. I much fear, indeed, that they belong to those feebler branches of the human race, which are apparently doomed to melt away on closer contact with the civilization by which it might be expected they would so much benefit; and though I do not on this account consider it a less sacred duty to extend to them the light of the gospel, and to make every effort to disseminate useful knowledge among them, I have little confidence in the result in a politico-economic point of view.

17. On the contrary, having seen a good deal of the different Indian tribes of Guiana, both in their native state and at the Missions, five out of six of which I have recently visited, I am led irresistibly to the conclusion that, while Christianity makes them less savage and more moral, the habits of semi-civilization which they acquire during its inculcation, without going far enough to teach them to subsist by agriculture, render their senses less acute, and their frames less capable of enduring the hardships and privations of a life in the wilderness; whilst they learn, in short, to be better men, they become worse hunters; and even when not exposed to the dreadful scourge of ardent spirits, to which many accidents with their frail boats are attributable, their physical capacities dwindle, and their numbers diminish by slow yet certain degrees. No importance can thus, in my humble opinion, be attached to any aid likely to be derived from the Bucks, in securing the ultimate prosperity of the colony.

18. Whether human foresight can modify the operations of what would seem a mysterious and inscrutable law of Providence, providing for their final extinction, it is not for me to predict, but every pains should certainly be taken, in founding future missions, to select a site as remote as may be from inhabited districts, with a soil sufficiently fertile to afford a prospect of sustaining the Indians who may settle around it; and no money should be expended, on any account whatsoever, in contributing to their support, such being the surest plan of destroying that self-reliance on which their very existence must depend in the too-probable case of the mission being after a time abandoned, from the failing health of the missionary, or from the deficiency of the pecuniary support derivable from its founders.

19. Turning now to the other great question regarding the effects of immigration in permanently augmenting the population, I purpose

briefly passing in review the census-returns, as they bear on each class of immigrants; forwarding, in order to supply, as far as possible, the further data requisite for such a comparison, two tables prepared by the Immigration Agent General* to show the precise number introduced from each country, from the date of the census of 1841 to that of the census of 1851, and the numbers allowed to return home at the public expense.

20. Before proceeding, however, to enquire into the circumstances connected with any particular class, I must beg leave to remind your Lordship of what has been already pointed out in paragraph 11, that, as the whole of the addition to the immigrant population by births, after arrival in the colony, is credited in the census under the head of "Natives of British Guiana," the return of each particular class of immigrants must necessarily, in conformity with the course of nature, exhibit a decrease, larger or smaller in proportion to the rate of mortality prevalent in the country from which such immigrants come, and their capability from various circumstances of withstanding the effects of a tropical climate.

21. This of itself sufficiently explains the first fact to which I have to refer, that, although upwards of 2,000 immigrants are set down as introduced from the West India Islands, in the first few years of the period in question, the number of natives of those islands seems from the Returns to be actually 600 or 700 less now than it was ten years ago; for, assuming the population of this description to have been on the average 10,000 during the whole decade, such a reduction would argue no greater rate of mortality than that of London, viz. 1 in 39.† If it be further taken into account that, so far from the whole reduction having been occasioned by death, a great many islanders returned home dissatisfied, at the time when wages were lowered in 1847, I think it may be safely concluded that the mortality among this class of immigrants has been wonderfully small.

22. The same, I think, will appear with regard to the next class added to the population; "the Africans," only 713 of whom had been introduced at the date of the previous census. Since that period 8281 have arrived from Sierra Leone, St. Helena, and Rio de Janeiro, making, with 108 direct from the Kroo Coast, a total of 9102. On the other hand, 550 have been provided with a free passage back to Africa, leaving 8552 only to be accounted for.

23. Estimating them on an average, throughout the period, at 6,000 souls, which I think is not far from the truth, the London ratio of 1 in 39 would lead to an expectation of 1540 deaths, whereas the utmost number deducible from the census-returns is only 1384, and there can be little doubt that this is considerably beyond the mark, owing to the necessarily fallacious test by which the Commissioners included all Africans of more than 40 years of age with the "old Africans" imported as slaves, as explained elsewhere.

24. I wish it were in my power to give your Lordship an equally satisfactory account of the next class of immigrants introduced into the colony, but unhappily the decrease among the "Natives of Madeira," as made apparent by the census-returns, is startling, and calculated, however it may be partially accounted for by other causes,

* Vide Tables B and C, Appendix. † Third Report of Registrar-General.

to call to mind the terrible mortality from yellow fever, which, some years ago, led to the interdiction of this species of immigration.

25. There is, however, as has been shown to your Lordship in detail, the best ground for supposing that since its resumption was permitted, the Madeiranese immigrants have been far more healthy than they ever before were; and as their constitution is now well understood by the medical profession in this colony, and those now arriving generally come to join connexions already acclimatized, and fully aware, therefore, of the healthiest locality and safest dietary, there seems little prospect that disease will again commit such havoc among this invaluable class of immigrants.

26. What the actual mortality has been cannot be very closely computed, as the number who have, from time to time, returned to Madeira with their earnings is not recorded, though it is well known to have been very large; and there was, moreover, a very considerable re-emigration to Cayenne, and other quarters, at the time the colony was subjected to such severe pecuniary pressure in 1847. Even recently not a few of the more enterprising have made their way to the gold-diggings of Upata, in the adjacent territory of Venezuela.

27. In addition also to these deductions from the number for which bounty has been paid by the colony, other causes have operated to swell that cipher in appearance very much beyond the real number of individuals introduced. I refer to the frauds practised by the Madeiranese themselves, into whose hands this traffic has chiefly fallen, in claiming the bounty, which they never scruple to do, whether their countrymen have been in the colony before or not, sometimes, indeed, offering passages back to Madeira, for almost nominal sums, in order to secure the bounty over again; sometimes even, as I have been informed, smuggling persons from on shore on board immigrant vessels just come into harbour, so as to swell the number of their passengers.

28. The only effectual way to check these practices is that which I have persuaded the Court of Policy to adopt after the end of the present year, when the rate per immigrant is to be reduced to a sum which, while sufficient to cover the expense of his passage, will cease to excite the cupidity of speculators such as those whose tricks are above described.

29. I trust that by this means a proper check will in future be imposed upon the expenditure incurred by the colony for this species of immigration, which is proved by these returns to have been extremely expensive in comparison to its results, since only 7,928 Madeiranese remained, according to the census on the 31st March last, against 2,219 settled here on 15th October, 1841, although in the interim bounty had been paid for no fewer than 14,269.

30. In making these remarks, I am far, however, from advocating any further restraint upon an immigration which has been most beneficial, by presenting to the emancipated negroes the spectacle of a civilized population of European extraction not ashamed to work in the fields, or carry a pack about the country, and by supplying an industrious and orderly middle class; neither would it be a wise policy to attempt to check the only influx of suitable labourers which partakes at all of a spontaneous character.

31. Looking, indeed, to the Venezuelan Republic on the one side, and to the empire of Brazil on the other, both colonized by settlers from the Iberian Peninsula, there can be no question of the peculiar adaptation of the people of that race to this part of South America, however unsuited it may be for systematic colonization by the natives of the colder countries of Europe; and so long as the mortality accompanying their immigration is considerably less, according to the best estimate that can be formed, than that of the white troops in the West Indies, I trust Her Majesty's Government will see no reason for interfering on public grounds.

32. The census returns as to the coolie immigrants not only tally very closely with the estimates which were furnished to your Lordship in my despatch of 18th April, 1850, No. 63, but are in the main confirmed by the number of coolies, of the season of 1845-6, who have subsequently come forward, either to accept the bounty, for remaining in the colony, or to claim a passage back to India, on the expiration of their term of service. The returns on the latter point are, in fact, more favourable than those of the census, as I shall afterwards take occasion to show. In the despatch referred to, I stated that I was of opinion that about 8,000 coolies were at that time remaining out of the 11,000 and odd introduced, and I produced such evidence of the greater mortality which had occurred among the immigrants from Madras, than among those from Calcutta, that your Lordship was pleased to approve of the renewed immigration then about to be set on foot, being confined to the latter port alone.

33. As regards the first point, the returns show (page 61) that 7,682 coolies were recorded on 31st March last; and as 244 have been sent back to India in the interval,* it is clear that my computation was a very close one. Respecting the second, it would appear, that of the 5,244 Calcutta coolies who arrived in the colony between 1845 and 1848, 4,017 remained at the date of the census, leaving, after deduction of the 244 above alluded to, 983 to be accounted for. This would give an annual deficiency of a little over 4 per cent., calculating the average length of residence of the whole number at about four years and a half. The fraction, indeed, may be safely disregarded, and the rate of mortality assumed at 4 per cent., for there can be no doubt that some, at least, of the surviving coolies escaped the notice of the census-enumerators. I myself saw, last April, not a few settled as wood-cutters up even to the great falls of the Demerara River, 250 miles in the interior; and I know, by a communication from the British Consul at Angostura, that 11 are still living at the Venezuelan gold-diggings; a few too have worked their way as sailors to Great Britain, and even to India.

34. On the other hand, the deficiency among the Madras coolies is, as anticipated, very great. Of 6,654 introduced, only 3,665 appear in the returns; and even allowing, in consideration of their wandering habits, that a considerable deduction ought to be made from the 45 per cent. thus unaccounted for, in estimating the number of deaths enough would still be left to prove that the mortality among the natives of Madras has been nearly twice as great as that among the natives of Calcutta.

* Vide Table C, Appendix.

35. This conclusion is fully borne out by the actual experience to which I have already referred, as out of 2,148 immigrants who arrived in the eight vessels from Madras* during the season 1845-6, 694, or 32 per cent., are missing at the present date, whilst out of 1,986 immigrants by the eight vessels which came from Calcutta† in the same season, only 340, or 17 per cent., have not made their appearance. Probably in both cases a few stragglers will still come forward, but I would, even without claiming allowance for this, direct your Lordship's attention to the fact, that the annual rate of mortality thus established, in regard to three-eighths of the coolies introduced, is considerably less in the case of the natives of both presidencies than that which might be inferred as above from the census returns; the aggregate deficiency of 1,034 coolies upon 4,134, being, moreover, only equal to 25 per cent., which, for the period embraced, little exceeds 4 per cent.‡

36. The same rate of mortality happens, by a remarkable coincidence, to have attended the early stage of coolie immigration into the Mauritius; and the Council of that island, so far from considering it excessive, calculated, in their report,§ on its continuance down to the present time. Confined, as the immigration to this colony now is, to Calcutta alone, there is every reason to conclude that the mortality attending it will not exceed the ordinary rate of European countries; and consequently will be very much smaller than that which must be prevalent in India, where the population, probably from over-density, would seem, from the most reliable accounts, to have diminished during the last half century.

37. There is one disadvantage, however, connected with this species of immigration, which bears too strongly upon the immediate question under consideration, with respect to the permanent increase, by such means, of the population, to be wholly omitted; namely, the right stipulated for on behalf of these coolies of claiming a free passage back to India at the expiration of five years. Such a condition seems clearly repugnant to all ideas of a sound system of colonization, and is, I firmly believe, as detrimental to the people themselves, by preventing their acquiring civilized habits, and divesting themselves of heathen prejudices, as it is injurious to the colonists, who are thus, at the very moment when the coolies become thoroughly acclimatized and accustomed to cane cultivation, subjected to the hard alternative of either sacrificing the benefits which have accrued from their presence, or of offering a premium for the renewal of an engagement, which, in the majority of cases, there would otherwise have been no real desire to break.

38. It is so far fortunate that where the latter course has been carried out, there seems every probability of the coolies becoming permanent settlers, it being, indeed, little likely, where the ties of home and kindred did not prove paramount to all other considerations at the end of only five years, that they should do so at the end of ten. A certain proportion, however, it will be seen, insist on returning; and I am afraid the diminution from this source, during the next few years, cannot be estimated at less than 2 or 3,000 souls."

* Vide Table D, Appendix. † Vide Table E, Appendix.

‡ 4·2 per cent. from 1837 to 1844.

§ Vide Parliamentary Paper, No. 641, Sess. 1845.

Appendix.

The general neglect of the aged and infirm since emancipation has been but too frequently dwelt on by the stipendiary magistrates, and I have, at the present moment, recommendations from several of them for the introduction of a more stringent poor-law, providing for the recovery, by summary conviction, of expenses incurred by the vestries in maintaining the parents of individuals well able to contribute to their support. As regards infantile mortality, it has been stated in the newspapers, by Dr. Gavin, Medical Inspector, on the authority of the Registrar of Burials of New Amsterdam, that out of 132 Creoles dying in that town in 1850, 48 were below 1 year of age, "an excessive mortality," as he remarks, which proves that neglect of, or ignorance in, rearing, or criminal conduct towards children, prevails to an alarming extent, to a degree, in fact, which must greatly retard the peopling of the colony. Dr. Gavin's other conclusions tend to prove a very alarming rate of mortality at all ages, but as he evidently forgot to take into account the effect which the public hospital and other similar institutions would have in swelling the apparent number of adult deaths in so small a community, I need not follow him.

When the returns of the enumerators came in, the greatest uncertainty prevailed, whether when the simple designation of "African" had been applied, the individual was to be considered one of the Africans introduced into the colony before the abolition of the Slave Trade, in 1807, or one of the immigrants who had been brought from Sierra Leone, or liberated elsewhere by Her Majesty's cruisers, since the year 1840, and the only way of determining the point appeared to be to class all above 40 years of age with the former, all under that age with the latter, which was accordingly done. This arrangement, though the best that could be made, necessarily understated the immigrant class, in the first place; because 44 years had elapsed since the Slave Trade was abolished, and if the ages had been set down in more detail, no individual below that exact age should have been classed with the old Africans; and, in the second place, because, though 40 was the maximum age at which immigrants were to be selected, many of those who were nearly that age at their introduction must now have considerably passed it. According to Captain Tulloch's admirable Report on the sickness and mortality among the troops in the West Indies, the annual ratio of mortality, for a long series of years, among the white regiments in the Windward and Leeward command, was equal to no less than 7·35 per cent., whilst the annual mortality amongst the Madeira immigrants in this colony, from 1841 to 1847, was only estimated by Dr. Bonyun, in his valuable Report on the subject,* at 7 per cent., much even of this decrease, as then explained, was attributable among other causes to the fatal epidemic of 1841; and, at a later date, to thousands of them having arrived in the colony with constitutions shattered by diseases incidental on starvation and misery.

I will only add, that I have the best reason to believe that during the last three years, the mortality, whether among troops or Madeira immigrants, has not exceeded 4 per cent.

* Parliamentary Papers, Lords, No. 250, Sess. 1848.

TABLE B.

Showing the Number of Immigrants introduced into British Guiana, under Colonial Bounty and at the Public Expense, from the taking of a Census on the 15*th October,* 1841, *to the taking of a Census on the* 31*st March* 1851.

Where from.	From 15th Oct., 1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	To 31st Mar., 1851.	Total.
St. Vincent	2	41	....	....	....	....	....	....	....	....	....	43
Barbadoes	178	176	....	....	555	357	....	....	....	....	....	1,266
St. Lucia	....	25	....	....	....	....	....	....	....	....	....	25
Dominica	32	....	....	....	....	....	....	....	....	....	....	32
Antigua	21	....	....	....	....	....	....	....	....	....	....	21
Tobago	2	2	....	....	....	....	....	....	....	....	....	4
Montserrat	14	122	....	....	....	....	....	....	....	....	....	136
Nevis	....	32	....	....	....	....	....	....	....	....	....	32
St. Kitts	....	21	....	....	....	....	....	....	....	....	....	21
Anguilla	137	52	....	....	....	....	....	....	....	....	....	189
New Providence	....	....	37	....	167	71	....	....	....	....	....	275
Calcutta	....	....	....	....	584	1,513	1,698	1,449	....	....	....	5,244
Madras	....	....	....	....	233	2,546	1,779	2,096	....	....	....	6,654
St. Helena	....	1,112	86	....	....	819	10	665	....	318	....	3,010
Sierra Leone	....	148	239	378	1,425	278	457	281	....	430	452	4,088
Kroo Coast	....	....	.. .	....	....	....	108	....	....	....	....	108
St. Thomas	....	13	....	....	....	....	....	....	....	....	....	13
Madeira	1,361	348	45	140	668	5,975	3,755	259	86	1,469	163	14,269
Rio Janeiro	299	563	....	145	....	....	....	....	104	72	....	1,183
Surinam	....	....	31	....	....	....	....	....	....	....	....	31
Martinique and Guadaloupe	....	....	112	255	....	....	....	....	....	....	....	367
Totals	2,046	2,655	550	918	3,632	11,559	7,807	4,750	190	2,289	615	37,011

TABLE C.—*Showing the Number and Description of People who have been allowed to return to their native Country at the expense of the Colony.*

Date of Departure.	Description of People.	Number. M.	Number. F.	Ship.	Where gone.
1843, 7th October	Africans	21	5	Arabian	Sierra Leone
1844, January	Ditto	13	5	Ditto	,,
1844, 20th May....	African and Kroos	30	6	Ditto	,,
1844, 28th October	Ditto	30	8	Ditto	,,
1845, 1st October	Africans	16	16	Margaret	,,
1847, 20th August	Ditto	74	24	H.M.S. Growler	,,
1850, 29th April....	Kroomen	59	1	Glentanner.....	,,
,, ,,	Africans	103	73	Ditto	,,
1850, 10th August	Kroomen	44	1	Ditto	,,
,, ,,	Africans	10	11	Ditto	,,
	Total.....	400	150		
1850, 19th Nov.....	Calcutta .... Coolies	197	47	Lucknow	Calcutta

MADRAS—1st Season.

TABLE D.—*A Statement of the Coolies who arrived in British Guiana from the 4th May, 1845, to the 16th May, 1846, showing the results of such Immigration from the first-named period to the 30th November, 1851.*

No.	Ship.	Where from.	Arrived.	Departed.	Renewed their 5 years' engagement.	Resigned claim to back passage.	Unaccounted for.	Total.
1	Nestor	Madras	225	53	137	1	34	225
2	Martin Luther	,,	235	45	118	1	71	235
3	John Wickliffe	,,	320	24	183	2	111	320
4	Tory	,,	228	27	138	....	63	328
5	Lady Kennaway	,,	297	60	111	22	104	297
6	Britannia	,,	251	56	104	5	86	251
7	Raymond	,,	243	16	147	4	76	243
8	Sir Robert Peel	,,	349	46	132	22	149	349
	Totals.....	....	2,148	327	1,070	57	694	2,148

CALCUTTA—1st Season.

TABLE E.—*A Statement of the Coolies who arrived in British Guiana from the 4th May, 1845, to the 16th May, 1846, showing the results of such Immigration from the first-named period to the 30th November, 1851.*

No.	Ship.	Where from.	Arrived.	Departed.	Renewed their 6 years' engagement.	Resigned claim to back passage.	Unaccounted for.	Total.
1	Lord Hungerford	Calcutta	334	163	136	....	53	334
2	Success.....	,,	229	70	128	....	31	229
3	Manchester	,,	274	40	190	....	44	274
4	Thetis	,,	275	82	122	....	71	275
5	Tamerlane	,,	219	47	133	....	39	219
6	Bussora Merchant	,,	206	39	132	1	34	206
7	Aurora	,,	283	98	135	....	50	283
8	Georgetown	,,	166	24	106	....	36	166
	Totals.....	....	1,986	563	1,082	1	340	1,986

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Abstract of the Returns of the Population, according to the Census taken on the 31st day of March, 1851.

Total Number of Inhabitants.

	Age.										Total at all Ages.		
	Under 5.		5 to 15.		15 to 30.		30 to 50.		Above 50.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Demerara	2,417	2,562	4,398	4,010	8,072	6,744	8,651	6,076	3,828	3,501	27,366	22,893	50,259
Essequibo	1,511	1,491	2,797	2,430	3,989	3,124	4,256	3,060	1,097	1,170	13,650	11,275	24,925
Berbice	1,382	1,350	2,656	2,190	3,255	2,888	3,357	2,768	1,324	1,200	11,974	10,396	22,370
Total Rural Population	5,310	5,403	9,851	8,630	15,316	12,756	16,264	11,904	6,249	5,871	52,990	44,564	97,554
Georgetown	1,437	1,603	2,696	3,192	3,859	4,104	3,073	3,212	966	1,366	12,031	13,477	25,508
New Amsterdam	266	247	465	633	751	670	594	605	170	232	2,246	2,387	4,633
Total Urban Population	1,703	1,850	3,161	3,825	4,610	4,774	3,667	3,817	1,136	1,598	14,277	15,864	30,141
Total Population of British Guiana	7,013	7,253	13,012	12,455	19,926	17,530	19,931	15,721	7,385	7,469	67,267	60,428	127,695

Race.

	European.	Mixed.	African.	East Indian.	Aborigines.	Total.
Demerara	5,121	3,796	37,383	3,401	558	50,259
Essequibo	1,758	1,845	18,548	2,332	442	24,925
Berbice	450	707	19,300	913	1,000	22,370
Total Rural Population	7,329	6,348	75,231	6,646	2,000	97,554
Georgetown	3,730	6,774	14,133	871	....	25,508
New Amsterdam	499	1,632	2,346	153	3	4,633
Total Urban Population	4,229	8,406	16,479	1,024	3	30,141
Total Population of British Guiana	11,558	14,754	91,710	7,670	2,003	127,695

The number of Aborigines returned in the above table includes only those who are located in or near to the cultivated portions of the colony.

To the numbers now given, at least 3,000 must be added to represent those who are scattered among the Tributaries of the Upper Essequibo and Corentyn Rivers. Of the total number (9,000,) it is probable that about one-third derive religious instruction at the various missions carried on by the Church of England at Kiblerie on the Mahaicony Creek, at Bartica Grove on the Essequibo, at Cabacaboerie on the Pomeroon, and at Waramoerie on the Morocco; by the Roman Catholics at St. Rose, on the same creek; and by the Church of Scotland at Indiana, on the Supenaam.

Native Country.

	County of Demerara.				County of Essequibo.				County of Berbice.				Total Rural Population.						
	Adults.		1 to 15 Years.		Adults.		1 to 15 Years.		Adults.		1 to 15 Years.		Adults.		1 to 15 Years.		Total at all Ages.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Natives of British Guiana	11,003	11,150	5,738	5,760	4,067	4,630	3,613	3,466	4,404	4,869	3,637	3,366	19,474	20,649	12,988	12,592	32,462	33,241	65,703
Natives of Barbadoes	1,008	646	128	119	459	249	44	42	199	97	17	11	1,666	992	189	172	1,855	1,164	3,019
Natives of other West India Islands	715	409	54	50	577	477	10	13	149	59	7	2	1,441	945	71	65	1,512	1,010	2,528
African Immigrants	1,289	631	209	117	1,010	597	280	148	1,433	777	292	104	3,732	2,005	781	369	4,513	2,374	6,887
Old Africans	1,507	1,418	...	...	666	667	...	...	840	808	...	...	3,013	2,893	...	...	3,013	2,893	5,906
Madeirans	2,145	1,410	474	392	611	376	163	151	153	61	19	11	2,909	1,847	656	554	3,565	2,401	5,966
English, Scotch, Irish, Dutch, and Americans	401	62	5	3	210	43	12	4	117	22	2	1	731	127	19	8	750	135	885
Coolies from Madras	1,398	400	146	105	210	62	20	9	339	116	42	37	1,947	578	208	151	2,155	729	2,984
Coolies from Calcutta	1,082	195	61	26	1,539	255	150	87	302	47	22	8	2,923	497	233	121	3,156	618	3,774
Not stated	...	...	...	...	7	1	...	...	...	...	...	...	7	1	...	...	7	1	8
Totals	20,551	16,321	6,815	6,572	9,356	7,357	4,292	3,920	7,936	6,856	4,038	3,540	37,843	30,534	15,145	14,032	52,988	44,566	97,554

	City of Georgetown.				Town of New Amsterdam.				Total Urban Population.							Total Population of British Guiana.						
	Adults.		1 to 15 Years.		Adults.		1 to 15 Years.		Adults.		1 to 15 Years.		Total at all Ages.			Adults.		1 to 15 Years.		Total of all Ages.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.	M.	F.	M.	F.	M.	F.	Grand Total.
Natives of British Guiana	3,634	5,709	3,675	4,375	787	1,089	666	815	4,421	6,798	4,341	5,188	8,762	11,986	20,748	23,895	27,447	17,329	17,780	41,224	45,227	86,451
Natives of Barbadoes	866	682	95	100	70	68	14	11	936	750	109	111	1,045	861	1,906	2,602	1,742	298	283	2,900	2,025	4,925
Natives of other West India Islands	722	683	63	60	143	142	6	12	865	825	69	72	934	897	1,831	2,306	1,770	140	137	2,446	1,907	4,353
African Immigrants	88	55	8	8	81	26	8	7	169	81	16	15	185	96	281	3,901	2,086	797	384	4,698	2,470	7,168
Old Africans	488	518	...	...	88	83	...	...	576	601	...	...	576	601	1,177	3,589	3,494	...	...	3,589	3,494	7,083
Madeirans	894	595	157	137	94	48	16	21	988	643	173	158	1,161	801	1,962	3,897	2,490	829	712	4,726	3,202	7,928
English, Scotch, Irish, Dutch, and Americans	686	256	47	36	140	27	7	4	826	283	54	40	880	323	1,203	1,557	410	73	48	1,630	458	2,088
Coolies from Madras	395	138	60	68	81	21	11	7	476	159	71	75	547	234	781	2,423	737	279	226	2,702	963	3,665
Coolies from Calcutta	125	46	28	11	26	3	1	3	151	49	29	14	180	63	243	3,074	546	262	135	3,336	681	4,017
Not stated	...	...	...	...	5	...	2	2	5	...	2	2	7	2	9	12	1	2	2	14	3	17
Totals	7,898	8,682	4,133	4,795	1,515	1,507	731	880	9,413	10,189	4,864	5,675	14,277	15,864	30,141	47,256	40,723	20,009	19,707	67,265	60,430	127,695

Profession, Trade, or Calling.

	Public Officers.	Professional Men.	Merchants and Shopkeepers.	Clerks.	Agriculturists.	Agricultural Labourers.	Other Labourers.	Mechanics and Artizans.	Domestic Servants.	Boatmen and Mariners.	Others variously employed.	No occupation, or none stated, including the Ladies of the Upper Class.	Children not employed, being of tender age.	Total.
Demerara	26	48	426	180	432	29,024	3,807	1,696	1,472	640	5,454	3,273	3,781	50,259
Essequibo	66	20	258	30	163	12,948	963	1,067	860	135	495	2,232	5,688	24,925
Berbice	1	32	110	8	174	11,760	270	744	503	47	392	2,350	5,979	22,370
Total—Rural Districts...	93	100	794	218	769	53,732	5,040	3,507	2,835	822	6,341	7,855	15,448	97,554
Georgetown	196	49	498	408	79	2,467	4,741	2,063	2,067	446	4,011	3,404	5,079	25,508
New Amsterdam	17	38	84	63	15	306	347	417	645	137	570	1,004	990	4,633
Total—Towns	213	87	582	471	94	2,773	5,088	2,480	2,712	583	4,581	4,408	6,069	30,141
Total Population of British Guiana	306	187	1,376	689	863	56,505	10,128	5,987	5,547	1,405	10,922	12,263	21,517	127,695

Religious Denomination.

	Church of England.	Church of Scotland.	Roman Catholic Church.	Wesleyans.	London Missionaries.	Dissenters, of what particular Denomination unknown.	Hindoos and Mahometans.	Not stated.	Total.
Demerara	10,484	3,363	4,879	3,520	8,571	9,008	3,394	7,040	50,259
Essequibo	13,154	3,287	1,477	1,053	449	1,295	2,332	1,878	24,925
Berbice	5,293	2,287	253	487	2,593	758	420	10,279	22,370
Total—Rural Districts	28,931	8,937	6,609	5,060	11,613	11,061	6,146	19,197	97,554
Georgetown	8,869	2,073	2,857	3,139	3,041	2,512	842	2,175	25,508
New Amsterdam	1,987	654	472	219	848	66	49	338	4,633
Total—Towns	10,856	2,727	3,329	3,358	3,889	2,578	891	2,513	30,141
Total British Guiana	39,787	11,664	9,938	8,418	15,502	13,639	7,037	21,710	127,695

Several inaccuracies having been discovered in the Returns from which this table is compiled, it must be looked upon only as an approximation to, and not as an exact account of, the different Religious Denominations in the Province.

The Wesleyan Church, according to their own published statements, number 10,774, which is 2,356 more than is exhibited in the table; and this difference is probably included in the column for Dissenters whose particular Denomination is unknown. In the same column the inhabitants of Fort Island are placed, most of whom worship with the "Congregational Dissenters," or, as they are denominated in the table, "London Missionaries," and should be added to their number.

In like manner the Mission at Bartica is improperly included in this column, instead of that appropriated to the Church of England; and at the Penal Settlement, where there is a resident Catechist of the Church of England, and services are regularly performed by the Visiting Chaplain, the whole establishment, with the exception of the Hindoo convicts, is included in the column where the particular religion is "not stated."

State of Education.

	Able to Read and Write.	Able to Read only.	Not ascertained, or wholly Illiterate.	Total.
Demerara	4,136	4,885	41,238	50,259
Essequibo	782	1,062	23,081	24,925
Berbice	493	1,012	20,865	22,370
Total—Rural Districts	5,411	6,959	85,184	97,554
Georgetown	6,501	3,958	15,049	25,508
New Amsterdam	1,040	549	3,044	4,633
Total—Towns	7,541	4,507	18,093	30,141
Total—British Guiana	12,952	11,466	103,277	127,695

Number of Houses.

	In Villages and Hamlets.				In Towns.				Total.			
	Inhabited.	Uninhabited.	Building.	Total.	Inhabited.	Uninhabited.	Building.	Total.	Inhabited.	Uninhabited.	Building.	Total.
Demerara	5,075	340	257	5,672	....	....	....	....	5,075	340	257	5,672
Essequibo	2,011	152	91	2,254	....	....	....	....	2,011	152	91	2,254
Berbice	2,943	201	82	3,226	....	....	....	....	2,943	201	82	3,226
Total—Rural Districts	10,029	693	430	11,152	....	....	....	....	10,029	693	430	11,152
Georgetown	....	....	....	....	4,317	354	224	4,895	4,317	354	224	4,895
NewAmsterdam	....	....	....	....	873	184	46	1,103	873	184	46	1,103
Total—Towns	....	....	....	....	5,190	538	270	5,998	5,190	538	270	5,998
Total — British Guiana	10,029	693	430	11,152	5,190	538	270	5,998	15,219	1231	700	17,150

Grand Total of the Population of the Colony of British Guiana, as enumerated on the Night of the 31st March, 1851.

Total, as per Census Returns		127,695
Aborigines, not included in the Census Returns, estimated at		7,000
		134,695
Ship's Company of Her Majesty's steamer Inflexible	150	
Merchant Seamen	295	
		445
Strength of the 2nd West India Regiment	369	
Strength of the 3rd West India Regiment	298	
Strength of the 72nd Highlanders	187	
		854
Grand Total		135,994

On the Statistics of the Insane, Blind, Deaf and Dumb, and Lepers, of Norway.—By Professor Holst. Translated from the Danish by A. S. Oliver Massey, Esq.

[Read before the Statistical Society of London, 21st June, 1852.]

In consequence of a proposal of the clergy, in 1825, to enquire into the condition of the insane in Norway, a royal commission was issued to consider measures for their amelioration. By this body it was deemed necessary to obtain as much information as possible regarding the insane in the whole kingdom, with the view to determine the number and extent of the establishments to be erected for their accommodation. This enumeration of the insane (the first which had been made) was undertaken by the clergy, independent of the general census, and the result of the inquiry was published by Professor Holst, pursuant to royal command, in 1828, under the title of a Report, Opinion and Proposal.

The next enumeration was made in 1835, in conjunction with the general census, and was taken in the towns by the magistrates and chief officers, and in the country by the parish priests, assisted by curates, tenants, schoolmasters, and assistants. This inquiry was induced by a desire on the part of the medical faculty that returns of the insane should be obtained at the same time with those from the financial, commercial, and customs departments of the kingdom.

These returns, which are now for the first time made public, were obtained separately from the rest of the census, the results of which were published in the Statistical Tables for the kingdom of Norway.

Each of these enumerations was taken on the same scheme, and the diseases classed under the four heads of mania, melancholia (monomania), dementia, and idiotia, and are thus characterized:—

Mania, or those suffering from a general disquietude of mind, combined with more or less violence, passion, or periodical delirium.

Melancholia, or those having one fixed idea, or suffering from a partial loss of senses, unable to direct their attention except to one subject, or a particular class of subjects, but in other respects more or less sane.

Dementia, or those suffering from general weakness or excitement of the intellectual faculties, and who, having been originally sane, have lost their senses in some ordinary manner.

Idiotia, or those who suffer from a more or less defective development of the intellect.

Notwithstanding that endeavours were made to render these characteristics so plain that even the incurable cases might be distinguished, that object was not fully attained. The commission had to regret, with regard to the enumeration of 1825, that many of the clergy had evidently confused the different kinds of madness with each other, especially mania, dementia, and idiotia; still the commissioners were enabled, in a number of cases, to rectify this confusion, many of the parish priests having made short notes of the most remarkable symptoms of those afflicted. Although this was calculated to serve as a guide to the design of the enumeration of 1835, it is not improbable that a similar, if not a greater confusion, took place in the latter,

especially when the want of discernment in the parties employed is taken into consideration, for it is hardly to be supposed that they possessed that degree of general intelligence and education which the clergy did, or bestowed the same judgment and attention upon the cases brought before them in the scheme of characteristics.

The number of insane in 1825 and 1835 must not, therefore, be looked upon as *perfectly* correct, as neither the clergy nor the people employed on the census could in all cases judge whether those returned as insane really were so; for although the latter were charged to examine strictly into the cases, it often took more time than those who had to carry out the census in the whole of their respective districts were able to afford. Still, although these enumerations could not, in all respects, be depended upon, those in Norway, which were carried out according to the public instructions, merit our attention.

In the subjoined table, the number of insane in 1835 are given for the towns and rural districts, classed under the several heads of disease and sex, to which has been added the population and the per-centage of insane.

	Insane—1835.														
	Mania.		Melancholia.		Dementia.		Idiotia.		Total.			Population, 1835.			Insane, per Cent.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.	M.	F.	Total.	
Towns.....	57	61	35	45	35	26	49	34	176	166	342	61,459	67,543	129,002	·0265
Rural Districts	306	299	269	286	226	233	836	779	1,637	1,597	3,234	523,922	541,903	1,065,825	·0303
Total...	363	360	304	331	261	259	885	813	1,813	1,763	3,576	585,381	609,446	1,194,827	·0300

It appears by this table that insanity prevails more among the male sex and in the rural districts.

Advantage was taken of the census of 1835 to enumerate the blind and deaf and dumb, and this enumeration may be regarded as more authentic, the definitions of blind and deaf and dumb being much more explicit.

The result of the enumeration of the blind was first published by Professor Holst, whereas a summary of the deaf and dumb was published in an account of the Deaf and Dumb Institution of Tkrondhjem.

The following table shows the number of blind in one eye and totally blind for the towns and rural districts, and the proportion per cent. of each class to the population:—

	Blind—1835.							
	Blind in one Eye.			Blind in one Eye, per Cent.	Totally Blind.			Totally Blind, per Cent.
	M.	F.	Total.		M.	F.	Total.	
Towns	107	92	199	·0155	78	81	159	·0123
Rural Districts....	2,328	1,517	3,845	·0361	950	1,000	1,950	·0183
Total.....	2,435	1,609	4,044	·0338	1,028	1,081	2,109	·0176

It would appear by the foregoing table that the number per cent. of blind in one eye was more than twice as great in the rural districts as in the towns, and the totally blind about a third greater. This difference probably arises from the facility of obtaining medical assistance in the towns. The number of males blind in one eye was greater than the number of females, in the towns, by one-sixth, and in the rural districts, by one-half; while, on the contrary, the totally blind were found slightly to preponderate among the females both in the towns and rural districts.

An abstract of the enumeration of the deaf and dumb taken in 1835 is here appended, by which it will be seen that this malady prevails most among the males and in the rural districts.

	Deaf and Dumb—1835.			
	Males.	Females.	Total.	Deaf and Dumb, per Cent.
Towns	58	43	101	·0078
Rural Districts	540	450	990	·0093
Total	598	493	1,091	·0091

In 1845, another enumeration was taken of the insane, blind, and deaf and dumb, in conjunction with the census, and on this occasion the lepers were enumerated. There are now, therefore, three enumerations of insane, two of blind and deaf and dumb, and one of lepers. Although this last was made by the same persons as took the former enumeration, the scheme was somewhat changed in consequence of the confusion which had taken place on the former occasion. The medical faculty having been consulted, they gave it as their opinion that it would be more simple to class all insanity in one table; but as the various descriptions of insanity require peculiar treatment, it would be desirable to obtain some knowledge of the class of disease, they considered that the former scheme of four classes might, without material inconvenience, be reduced to two, substituting two words peculiar to the Danish language, which would be readily understood by the enumerators, viz., "rasende," or those suffering from general wearing trouble in the intellect, combined with violence, rage, or fury; and "fjanter," or those suffering from a general weakness or absence of developed faculties.

The first include those classed under mania and melancholia in the former scheme, and the latter may be divided into idiotia, or those born insane, and dementia, or those who subsequently become so; and this arrangement would not materially influence the institutions.

The following table gives the number of insane for the towns and rural districts, classed in accordance with the last-mentioned scheme, to which has also been added the population for 1845, and the percentage of insane:—

	Insane—1845.												
	Rasende (Mania and Melancholia).			Fjanter.							Total.		
				At Birth (Idiotia).		Since Birth (Dementia).		Total.					
	M.	F.	Total.	M.	F.	M.	F.	M.	F.	Total.	M.	F.	Total.
Towns	61	53	114	42	34	60	75	102	109	211	163	162	325
Rural Districts	427	462	889	997	990	462	627	1,459	1,617	3,076	1,886	2,079	3,965
Total...	488	515	1,003	1,039	1,024	522	702	1,561	1,726	3,287	2,049	2,241	4,290

	Population, 1845.			Insane, per Cent.
	Males.	Females.	Total.	
Towns	77,930	83,945	161,875	·0201
Rural Districts	574,310	592,286	1,166,596	·0339
Total.....	652,240	676,231	1,328,471	·0323

It will be observed, in the foregoing table, that there was a considerable preponderance of insane among females, and that insanity prevailed one-third less in the towns than in the rural districts.

In the enumeration of the blind, in 1845, the medical faculty were of opinion that the plan adopted in 1835, of distinguishing between the "blind of one eye" and those "totally blind," was unnecessary, as they considered that, for medical statistics, those cases only were important in which the patient was either totally blind, had only partial vision, or was unable to perform any work requiring sight; hence the class of "blind in one eye" was omitted; and the blind in this scheme corresponds with the totally blind in the former, and thus the two enumerations may be compared. (Vide page 254.)

The subjoined table gives the number of blind in 1845 in the towns and rural districts, and the proportion of blind per cent. to the population:—

	Blind—1845.			
	Males.	Females.	Total.	Blind, per Cent.
Towns.....	101	104	205	·0126
Rural Districts	1,263	1,285	2,548	·0218
Total.....	1,364	1,389	2,753	·0207

It will be seen by this table that blindness slightly preponderated in the female sex, and prevailed with far greater intensity in the rural districts than in the towns.

In the census of 1845, the deaf and dumb were also enumerated. In the abstract appended, it will be observed that this malady preponderated greatly among males and in the rural districts:—

	Deaf and Dumb—1845.			
	Males.	Females.	Total.	Deaf and Dumb, per Cent.
Towns	75	48	123	·0076
Rural Districts	531	452	983	·0084
Total	606	500	1,106	·0083

The table annexed gives an abstract of the enumeration of lepers in 1845, and exhibits the number in the towns and rural districts, their per-centage to population, and their condition, *i. e.*, whether married or unmarried :—

	Lepers—1845.				Lepers—1845.			
	M.	F.	Total.	Lepers, perCent.	Condition.	M.	F.	Total.
Towns	101	100	201	·0124	Married	252	151	403
Rural Districts	520	402	922	·0079	Unmarried	369	351	720
Total	621	502	1,123	·0084	Total	621	502	1,123

It would appear by the foregoing table that there were more lepers per cent. in the towns than in the rural districts, chiefly owing to the numbers who come from the country to the hospitals in towns; and that in the rural districts leprosy prevailed one-fourth more among males than among females. As respects the condition of the lepers, it will be seen that the proportion of married to unmarried was as 4 to 7.

The following table exhibits a comparison of the blind for the years 1835 and 1845 :—

	Comparison of Blind.					
	1835.			1845.		
	M.	F.	Total.	M.	F.	Total.
Towns	78	81	159	101	104	205
Rural Districts	950	1,000	1,950	1,263	1,285	2,548
Total	1,028	1,081	2,109	1,364	1,389	2,753

A comparison of the insane for the years 1825, 1835, and 1845, is here appended:—

Comparison of Insane.

	1825.								
	Mania and Melancholia.		Dementia.		Idiotia.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Towns	70	62	31	23	20	23	121	108	229
Rural Districts	398	358	137	150	349	288	884	796	1,680
Total.....	468	420	168	173	369	311	1,005	904	1,909

	1835.								
	Mania and Melancholia.		Dementia.		Idiotia.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Towns	92	106	35	26	49	34	176	166	342
Rural Districts	575	585	226	233	836	779	1,637	1,597	3,234
Total.....	667	691	261	259	885	813	1,813	1,763	3,576

	1845.								
	Mania and Melancholia.		Dementia.		Idiotia.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Towns	61	53	60	75	42	34	163	162	325
Rural Districts	427	462	462	627	997	990	1,886	2,079	3,965
Total.....	488	515	522	702	1,039	1,024	2,049	2,241	4,290

It will be observed by the foregoing comparison that in each period the number of insane has increased in greater ratio than the population, although in the latter period there has been a slight decrease of the malady in towns; also, that in the first ten years the increase included all classes of insanity, while in the last ten years it was confined to the classes of dementia and idiotia, mania and melancholia having sensibly *decreased.*

As respects sex, it would appear that while in the two former enumerations insanity preponderated among males, in the last it prevailed in considerable excess among females, and chiefly in the class of dementia.

And the subjoined table shows a comparison of the deaf and dumb for the same periods:—

	Comparison of Deaf and Dumb.					
	1835.			1845.		
	M.	F.	Total.	M.	F.	Total.
Towns	58	43	101	75	48	123
Rural Districts	540	450	990	531	452	983
Total	598	493	1,091	606	500	1,106

The number of gypsies and wanderers, who may be said to have no settled abode, amount to 1,145. The insane, blind, deaf and dumb, and lepers, among these, are not included in any of these tables. Their number added to the census, makes the total population of Norway in 1845 amount to 1,329,616 souls.

MISCELLANEOUS.

Progress of Great Britain during the first half of the Nineteenth Century.

(From the "Economist," with corrections.)

THE nineteenth century having completed half its course, we deem it well to give a sketch of the progress made by Great Britain during the last fifty years, a progress of which we have just reason to be proud.

Population.—In the first place, we give a comparison of the population in 1700, 1801, and 1851.

	1700.	1801.	1851.
England and Wales	5,000,000	8,892,000	17,922,768
Scotland	1,000,000	1,599,000	2,870,784
Ireland	2,000,000	4,500,000	6,515,794
Total	8,000,000	14,991,000	27,309,346

From the preceding table, it appears, that whilst, during the whole of the last century, the population did not quite double itself, in the first *half* of this present one it has nearly redoubled, consequently, the increase has been twice as rapid in the last *fifty years* as it was in the last *century*.

Territories.—We are far from looking upon the extension of a nation's territory (except when it has been obtained over uninhabited or barbarous countries) either as a necessary element of power or honour, or as a subject for rejoicing. However that may be, we have added to our possessions since 1800. In Europe, 10 islands, having a total superficies of 1,192 square miles, and a population of about

350,000 souls. In the West Indies, 100,058 square miles, with a population of 130,000 souls. In Africa, independent of our last conquest of the Caffres, 201,000 square miles, and 300,000 souls. In Australia, colonization, and not conquest, has been our aim; but, at least, New Zealand may be considered as a newly-acquired territory, since our right to this colony has only been formally established within the last twenty years. One may say that the civilized population of Australia has been entirely created since 1800; it amounted, according to the last census (1842), to 217,000 individuals; and since the emigration, from then till 1848, has been more than 40,000. Whilst the natural increase of population has been rapid, we cannot put the number of our fellow-creatures existing in that country at less than 300,000. Of all our possessions, it is perhaps the most flourishing and full of promise; and it is from this that we may expect the future extension of the greatness and power of Britain.

The exports of wool from these colonies, which, in 1819, did not amount to more than 74,284*l.*, attained, in 1849, the immense sum of 35,879,000*l.* Nothing was wanting to these colonies, to make them rapidly progress, except to enjoy fully the blessings of English liberty, and this advantage has been granted them by the Act of Parliament recently passed in their favour.

In Asia, our increase of territory since the beginning of the century has been larger than in any other part of the world. In China, we have gained the island of Hong Kong; and in India, we have added to our empire, independent of the recent acquirement of the Punjaub and Scinde, 228,700 square miles, with a population of 100,000,000 natives.

Industry and Commerce.—The extraordinary increase of our industry has been so often exhibited, that we shall limit ourselves to a table which will show at a glance some of the most remarkable facts of this increase.

	1800.	1849.	Increase per Cent.
Exports—Official value ..... £	24,304,000	190,101,000	682
,, Declared value..... ,,	39,471,000	63,596,000	61
Imports—Official value ..... ,,	28,257,000	83,330,000	194
Export of Manufactured Cotton.....yds.	72,000,000	1,223,500,000	1,599
Oil consumed in Great Britain .....tons	15,600,000	38,400,000	146
Cast Iron ..... ,,	150,000	1,750,000	1,066
Tonnage ..... ,,	3,337,000	11,501,000	244
Raw and Spun Silk..... lbs.	1,167,000	5,618,000	382
Raw Wool ..... ,,	8,615,000	75,100,000	772
Raw Cotton..... ,,	56,000,000	700,000,000	1,150

It will be seen from this table, that whilst our population has almost doubled itself since 1800, our importations are more than *three times*, our exports *eight times*, and our produce almost *ten times* greater, than at the commencement of the century.

Metropolis of London within the 135 *Districts of the Registrar-General, comprising the Bills of Mortality in an area of* 74,070 *acres, and containing about* 2,200,000 *Inhabitants, in the Year* 1849. By C. A. Cocke, Esq.

London, 1849.	London.	North of Thames.	South of Thames.
Population estimated to the middle of 1849	2,206,076	1,621,029	585,047
Annual rate of increase per cent. (from the Census of 1841)	1·55	1·35	1·74
Average elevation of the ground, in feet, above Trinity high-water mark	39	51	5
Area in square miles	115·2	49·0	66·2
Number of square yards to each person	162	94	350
1 birth in	30	31	30
1 death in	32	35	26
1 death from cholera in	156	232	82
1 death from cholera in total deaths	5	7	3
Estimated increase of population for the year 1849, by the annual progress of 1·55 per cent. (from the Census of 1841)	33,690	24,881	8,809
Proportion of births to 100 deaths	106	115	88
Ditto on an average of 5 years, 1844-48	128	128	127
Deaths in the year 1849	68,432	46,134	22,298
Relative proportion to population	·031020	·028460	·038113
Average deaths of 5 years, 1844-48	53,167	38,979	14,188
Relative proportion to population	·025239	·025176	·025411
Cholera in the year 1849	14,125	6,992	7,133
Relative proportion to population	·006403	·004313	·012193
Relative proportion to mortality	·206409	·151558	·319994
Births in the year 1849	72,662	53,124	19,538
Relative proportion to deaths	1·062813	1·151515	·876220

Deaths in the Year 1849.

	Males.		Females.		Total.		
	Cholera.	All Causes.	Cholera.	All Causes.	Cholera.	All Causes.	Total.
Under 15 years....	2,121	15,869	1,828	14,338	3,949	30,207	34,156
15 to 60	3,757	12,370	4,276	12,760	8,033	25,130	33,163
60 and above	824	5,795	1,319	7,302	2,143	13,097	15,240
Total.....	6,702	34,034	7,423	34,400	14,125	68,434	82,559

ARMY, &c.

Parliamentary Return, March, 1852.

(*Mr. Hume.*)

A Return of all Ranks of the Regular Army (exclusive of the Troops in the Service of the East India Company) in each year from 1835-36 *to* 1851-52 *inclusive, distinguishing the numbers in the Regular Army, the Militia and Volunteer Corps, and the Royal Navy,*

Years.	Regular Army, including Ordnance Corps.	Militia Staff, Volunteer Corps, and Enrolled Pensioners.	Land Forces of all Services.	Royal Navy.	Total Land and Sea Forces.
1835-36	89,590	22,062	111,652	26,500	138,152
1836-37	89,638	20,431	110,069	33,700	143,769
1837-38	89,608	20,353	109,961	34,165	144,126
1838-39	97,963	15,804	113,767	34,165	147,932
1839-40	103,642	15,173	118,815	34,165	152,980
1840-41	102,485	15,429	117,914	39,665	157,579
1841-42	101,163	15,449	116,612	43,000	159,612
1842-43	110,565	15,347	125,912	43,000	168,912
1843-44	109,964	16,358	126,322	39,000	165,322
1844-45	109,407	26,116	135,523	36,000	171,523
1845-46	109,128	26,303	135,431	40,000	175,431
1846-47	119,553	34,682	154,235	40,000	194,235
1847-48	120,744	40,185	160,929	41,500	202,429
1848-49	127,840	31,069	158,909	43,000	201,909
1849-50	117,447	31,231	148,678	40,000	188,678
1850-51	113,328	32,094	145,422	39,000	184,422
1851-52	112,914	19,219	132,133	39,000	171,133

BRITISH MUSEUM.

Parliamentary Return, March, 1852.

(*Sir Robert Harry Inglis.*)

A Return of the Number of Persons admitted to View the British Museum in each Year from 1846 *to* 1851, *inclusive.*

Months.	Year ending Christmas					
	1846.	1847.	1848.	1849.	1850.	1851.
January	40,737	39,167	57,781	57,791	58,596	94,054
February	36,875	26,113	76,934	49,551	49,877	65,657
March	51,141	37,288	81,424	71,726	75,862	63,852
April	90,625	89,618	78,048	104,752	131,060	96,247
May	51,660	100,468	60,547	95,594	110,485	123,164
June	99,273	96,564	89,546	107,131	86,533	335,550
July	87,210	82,025	111,220	97,055	133,520	344,356
August	101,506	80,136	88,585	109,709	109,349	580,709
September	45,119	80,636	66,227	58,670	69,894	523,614
October	43,505	68,834	62,008	76,046	79,802	239,901
November	47,732	39,099	50,256	62,857	86,703	20,201
December	55,218	81,017	75,409	88,191	107,182	37,449
Total	750,601	820,965	897,985	979,073	1,098,863	2,524,754

A Return of the Number of Visits made to the Reading Rooms for the purpose of Study or Research, of the Number of Visits by Artists and Students to the Galleries of Sculpture for the purpose of Study, and of the Number of Visits made to the Print Room.

Years.	Reading Rooms.	Galleries of Sculpture.	Print Room.
1810	1,950	No returns	No returns
1815	4,300	Ditto	Ditto
1820	8,820	Ditto	Ditto
1825	22,800	Ditto	Ditto
1830	31,200	Ditto	Ditto
1831	No returns	4,938	Ditto
1832	Ditto	No returns	4,400
1833	Ditto	Ditto	No returns
1834	Ditto	Ditto	Ditto
1835	63,466	6,081	1,065
1840	67,542	6,354	6,717
1841	69,303	5,655	7,744
1842	71,706	5,627	8,781
1843	70,931	4,907	8,162
1844	67,511	5,436	8,998
1845	64,427	4,256	5,904
1846	66,784	4,124	4,390
1847	67,525	3,508	4,572
1848	65,867	3,694	5,813
1849	70,371	6,804	5,970
1850	78,533	6,611	3,745
1851	78,211	6,086	3,867

CORN, &c.

Parliamentary Return, June, 1852.

(*Mr. George Sandars.*)

A Return of the Quantities of Corn, Grain, Meal, and Flour, Imported into the United Kingdom from Foreign Countries and British Possessions, in each Year from 1847 *to* 1851, *inclusive.*

Species of Corn, &c.	1847.	1848.	1849.	1850.	1851.
	Quarters.	Quarters.	Quarters.	Quarters.	Quarters.
Wheat and Wheat Flour	4,376,235	3,082,230	4,802,475	4,830,263	5,330,412
Barley and Barley-meal	747,252	1,054,293	1,381,074	1,035,935	829,574
Oats and Oatmeal	1,737,730	971,253	1,292,707	1,158,290	1,200,136
Rye and Ryemeal	276,260	72,141	245,434	94,091	26,323
Pease and Peameal	149,360	216,044	234,453	180,379	99,485
Beans and Beanmeal	434,160	487,936	457,933	439,361	318,224
Indian Corn and Meal	3,931,787	1,643,426	2,254,116	1,280,376	1,810,425
Buck Wheat and Buck Wheatmeal	19,258	253	626	313	1,491
Beer or Bigg	491	906	843	571	1,940
Malt	....	1	....	....	16
Total of all sorts	11,672,533	7,528,483	10,669,661	9,019,579	9,618,026

A Return of the Quantities of Corn, Grain, Meal, and Flour, Imported into Great Britain from Ireland, in each Year from 1847 *to* 1851, *inclusive.*

Species of Corn, &c.	1847.	1848.	1849.	1850.	1851.
	Quarters.	Quarters.	Quarters.	Quarters.	Quarters.
Wheat and Wheat Flour	184,022	304,873	234,680	176,566	95,116
Barley and Barley-meal	47,578	79,885	46,400	40,779	44,479
Oats and Oatmeal	703,463	1,546,568	1,123,469	1,075,388	1,141,976
Rye and Ryemeal	1,498	15	414	360	....
Pease and Peameal	4,659	2,572	3,369	4,360	3,781
Beans and Beanmeal	22,361	12,314	22,450	21,551	25,002
Indian Corn and Meal	....	....	552	1,343	7,543
Beer or Bigg	....	192	191	167	360
Malt	5,956	6,365	5,181	8,425	6,431
Total of all sorts	969,537	1,952,784	1,436,706	1,328,939	1,324,688

CORN, &c.—(IRELAND).

Parliamentary Return, June, 1852.

(*Mr. Booker.*)

A Return of the Quantities of Corn, Grain, Meal, and Flour, Imported into Ireland from Great Britain, for the Years 1849, 1850, *and* 1851.

Species of Corn, &c.	1849.			1850.			1851.		
	British Growth.	Foreign Growth.	Total.	British Growth.	Foreign Growth.	Total.	British Growth.	Foreign Growth.	Total.
	Quarters.	Quarters.	Quarters.	Quarters.	Quarters.	Quarters.	Quarters.	Quarters.	Quarters.
Wheat	13,838	41,534	55,372	21,267	56,431	77,698	14,997	104,350	119,347
Barley	13,000	5,263	18,263	23,179	17,547	40,726	30,380	9,936	40,316
Oats	2,704	590	3,294	5,679	930	6,609	1,205	1,013	2,218
Rye	1,546	21,562	23,108	5,562	13,085	18,647	305	3,040	3,345
Pease	51	693	744	472	601	1,073	266	469	735
Beans	293	1,821	2,114	298	2,048	2,346	156	1,421	1,577
Malt	7,348	....	7,348	2,533	....	2,533	4,935	....	4,935
Indian Corn	....	505,914	505,914	....	359,227	359,227	....	249,421	249,421
Total of Corn and Grain	38,780	577,377	616,157	58,990	449,869	508,859	52,244	369,650	421,894
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Wheat Meal or Flour	17,833	194,846	212,679	54,857	240,262	295,119	111,484	325,687	437,171
Barley Meal	....	....	....	4,360	50	4,410	543	28	571
Oatmeal	13,725	5,082	18,807	4,277	3,175	7,452	3,105	185	3,290
Rye Meal	2,074	26,154	28,228	4,424	7,279	11,703	50	....	50
Pea Meal	....	238	238	....	....	....	....	....	....
Bean Meal	....	....	....	8	85	93	25	273	298
Indian Corn Meal	....	78,698	78,698	....	28,456	28,456	....	25,071	25,071
Total of Meal and Flour	33,632	305,018	338,650	67,926	279,307	347,233	115,207	351,244	466,451

DISORDERLY CONDUCT AND DRUNKENNESS.

Parliamentary Return, February, 1852.

(*Mr. Hume.*)

Metropolitan Police.

A Return of the Number of Persons taken into Custody by the Metropolitan Police Force, for Disorderly Conduct and Drunkenness, and the Results, for each Year, from 1831 *to* 1851 *inclusive.*

Disorderly Conduct.

Years.	Taken into Custody.			Convicted.			Discharged.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1831..	3,096	7,287	10,383	1,211	4,034	5,245	1,885	3,253	5,138
1832..	3,284	5,487	8,771	1,420	3,260	4,680	1,864	2,225	4,089
1833..	3,382	5,178	8,560	1,547	3,076	4,623	1,835	2,102	3,937
1834..	5,039	6,621	11,660	1,948	3,601	5,549	3,091	3,020	6,111
1835..	4,751	6,640	11,391	2,112	3,850	5,962	2,639	2,790	5,429
1836..	5,043	6,110	11,151	2,899	4,112	7,011	2,144	1,998	4,142
1837..	4,900	5,862	10,762	2,347	3,498	5,845	2,553	2,364	4,917
1838..	5,146	5,967	11,113	2,666	3,852	6,525	2,480	2,108	4,588
1839..	4,957	6,371	11,328	2,333	3,677	6,010	2,624	3,694	6,318
1840..	6,927	8,177	15,104	2,872	4,197	7,069	4,055	3,980	8,035
1841..	7,897	7,913	15,810	3,660	3,962	7,622	4,237	3,951	8,188
1842..	8,274	6,931	15,205	4,434	3,463	7,897	3,840	3,468	7,308
1843..	7,627	7,228	14,855	3,917	3,817	7,734	3,710	3,411	7,121
1844..	3,560	4,500	8,060	1,568	2,525	4,093	1,992	1,973	3,965
1845..	2,754	3,520	6,274	1,248	1,977	3,225	1,506	1,543	3,049
1846..	2,707	2,436	5,143	1,121	1,970	3,091	1,586	1,466	3,052
1847..	2,450	3,211	5,661	1,083	1,876	2,959	1,367	1,335	2,702
1848..	2,781	3,684	6,465	1,253	2,396	3,649	1,528	1,288	2,816
1849..	3,245	4,425	7,670	1,431	2,830	4,261	1,814	1,595	3,409
1850..	3,056	4,285	7,341	1,304	2,755	4,059	1,752	1,530	3,282
1851..	2,556	3,762	6,318	1,218	2,326	3,544	1,338	1,436	2,774

Drunkenness.

1831..	19,748	11,605	31,353	3,185	1,194	4,379	16,563	10,411	26,974*
1832..	20,304	12,332	32,636	2,707	798	3,505	17,597	11,534	29,131†
1833..	18,268	11,612	29,880	3,319	1,222	4,541	14,949	10,390	25,339‡
1834..	12,679	7,100	19,779	6,225	2,610	8,835	6,454	4,490	10,944
1835..	14,271	7,523	21,794	7,282	2,631	9,913	6,989	4,892	11,881
1836..	15,867	6,861	22,728	8,151	2,599	10,750	7,716	4,262	11,978
1837..	14,021	7,405	21,426	6,931	2,414	9,345	7,090	4,991	12,081
1838..	14,296	6,941	21,237	7,536	2,381	9,917	6,760	4,560	11,320
1839..	13,952	7,317	21,269	6,856	2,518	9,374	7,096	4,799	11,895
1840..	10,663	5,842	16,505	4,706	1,890	6,596	5,957	3,952	9,909
1841..	9,883	5,123	15,006	3,877	1,371	5,248	6,006	3,752	9,758
1842..	7,988	4,350	12,338	2,894	1,021	3,915	5,094	3,329	8,423
1843..	6,752	4,138	10,890	2,275	888	3,163	4,477	3,250	7,727
1844..	5,124	3,197	8,321	1,816	825	2,641	3,308	2,372	5,680
1845..	5,674	3,689	9,363	1,641	786	2,427	4,033	2,903	6,936
1846..	6,143	4,123	10,266	2,036	933	2,969	4,107	3,190	7,297
1847..	5,307	3,697	9,004	1,252	427	1,679	4,055	3,270	7,325
1848..	4,816	3,576	8,392	1,002	453	1,455	3,814	3,123	6,937
1849..	6,412	4,455	10,867	1,583	662	2,245	4,829	3,793	8,622
1850..	7,406	5,071	12,477	1,939	820	2,759	5,467	4,251	9,718
1851..	6,207	4,461	10,668	1,302	612	1,914	4,905	3,849	8,754

* Including 23,787 dismissed by Superintendents.

† „ 25,702 „ „

‡ „ 18,417 „ „ up to August, since which time all persons taken into Custody for Drunkenness were sent before the Magistrates.

DISORDERLY CONDUCT AND DRUNKENNESS.

Years.	Taken into Custody.			Convicted.			Discharged.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1831..	Prior to the Year 1844, under the head of "Disorderly Conduct," is included all drunken cases attended with disorder.								
1832..									
1833..									
1834..									
1835..									
1836..									
1837..									
1838..									
1839..									
1840..									
1841..									
1842..									
1843..									
1844..	4,493	3,660	8,153	2,440	1,570	4,010	2,053	2,090	4,143
1845..	4,566	3,432	7,998	2,279	1,387	3,666	2,287	2,045	4,332
1846..	4,522	3,917	8,439	2,284	1,557	3,841	2,238	2,360	4,598
1847..	4,161	3,709	7,870	2,217	1,414	3,631	1,944	2,295	4,239
1848..	4,381	3,688	8,069	2,183	1,318	3,501	2,198	2,370	4,568
1849..	5,644	4,516	10,160	2,874	1,730	4,604	2,770	2,786	5,556
1850..	6,627	4,793	11,420	3,647	1,936	5,583	2,980	2,857	5,837
1851..	6,972	5,532	12,504	3,827	2,286	6,113	3,145	3,246	6,391

Metropolitan Police District.

Population in 1831	..	..	..	..	1,515,585
„ 1841	..	..	..	..	2,068,107
„ 1851	..	..	..	..	2,361,640

CITY OF LONDON POLICE.

A Return of the Number of Persons taken into Custody by the City of London Police Force, for Disorderly Conduct and Drunkenness, and the Results, for each Year from 1840 *to* 1851, *inclusive.*

Years.	Disorderly Conduct.			Drunkenness.		
	Discharged by Magistrates.	Summarily Convicted.	Total.	Discharged by Magistrates.	Summarily Convicted.	Total.
1840.....	505	261	766	794	525	1,319
1841.....	535	267	802	1,499	814	2,313
1842.....	356	189	545	350	248	598
1843.....	366	225	591	207	186	393
1844.....	307	354	661	160	204	364
1845.....	251	341	592	163	261	424
1846.....	370	465	835	111	199	310
1847.....	376	447	823	93	225	318
1848.....	280	636	916	106	197	303
1849.....	226	507	733	117	170	287
1850.....	136	445	581	67	241	308
1851.....	138	513	651	86	194	280

Population of the City.

In 1831.....	122,491
1841.....	123,563
1851.....	127,869

EXCISE.—*A Return of the Gross and Net Receipts of the Duties of Excise in the United Kingdom for each Year from* 1842-51, *inclusive.*

GROSS RECEIPTS.

	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.
	£	£	£	£	£	£	£	£	£	£
Game Certificates	10,126	11,721	11,575	10,975	9,202	8,231	11,167	9,062	9,670	9,299
Hops	266,778	310,930	245,668	258,766	290,198	444,396	395,513	208,341	309,444	433,989
Licenses	1,019,788	1,025,233	1,040,977	1,078,513	1,094,760	1,099,334	1,110,777	1,115,346	1,138,847	1,161,287
Malt	4,615,116	4,873,266	4,993,236	5,177,986	5,346,160	4,674,116	5,443,521	5,185,223	5,645,490	5,261,763
Paper	627,143	676,062	709,320	802,048	836,831	810,944	789,035	859,575	915,121	993,592
Post-Horse Duty	175,288	162,204	163,162	169,873	172,621	161,119	146,012	144,194	142,038	145,434
Soap	1,060,849	1,132,572	1,190,653	1,219,300	1,193,969	1,114,959	1,210,400	1,244,397	1,309,740	1,295,652
Spirits, Home-made	5,041,942	4,958,368	5,241,584	5,759,563	5,949,444	5,247,498	5,476,204	5,793,881	5,944,182	6,059,210
Sugar „	6,586	4,549	6,961	3,370	3,073	169	...	...	...	3
	12,823,616	13,154,905	13,603,136	14,480,394	14,896,258	13,560,766	14,582,629	14,560,019	15,414,532	15,360,229
Railways	...	...	...	...	...	61,948	232,270	235,475	251,215	287,332
Stage Carriages	...	...	...	...	...	83,224	196,904	188,849	195,674	217,063
Hackney „	...	...	...	...	...	21,643	70,409	73,234	79,208	88,033
Sugar used in Brewing	...	...	...	...	...	...	...	...	...	153
Auctions	297,783	284,981	308,630	86,466	...	...	...	...	...	...
Bricks	400,875	363,202	446,716	568,570	646,893	690,669	462,451	462,765	27,883	...
Glass	777,836	764,674	847,160	311,611	...	...	...	...	...	...
Vinegar	23,841	25,914	18,202	...	...	...	...	...	...	...
Totals	14,323,951	14,593,676	15,223,844	15,447,041	15,543,151	14,418,250	15,544,663	15,520,342	15,968,512	15,952,810

NET RECEIPTS.

	£	£	£	£	£	£	£	£	£	£
Game Certificates	10,126	11,721	11,575	10,973	9,202	8,231	11,167	9,062	9,670	9,299
Hops	260,979	308,366	244,322	257,447	286,265	440,403	392,381	205,936	307,077	426,029
Licenses	1,019,069	1,024,178	1,040,271	1,076,103	1,093,367	1,098,396	1,110,028	1,114,691	1,138,158	1,160,571
Malt	4,385,221	4,659,638	4,752,296	4,915,004	5,084,650	4,456,739	5,225,071	4,964,066	5,391,322	5,035,559
Paper	588,341	639,895	669,906	758,982	791,991	762,172	745,795	810,554	852,996	928,876
Post-Horse Duty	175,288	162,203	163,162	169,852	172,621	161,117	146,012	144,194	142,027	145,432
Soap	828,004	892,263	927,726	963,506	965,040	896,647	990,512	1,026,080	1,065,571	1,043,026
Spirits, Home-made	5,041,772	4,958,223	5,241,157	5,759,043	5,949,151	5,235,490	5,455,475	5,757,336	5,909,383	6,030,324
Sugar „	6,586	3,957	6,961	3,270	3,073	169	...	...	...	3
	12,315,386	12,660,444	13,057,676	13,914,180	14,355,360	13,059,364	14,076,441	14,031,919	14,816,204	14,779,119
Railways	...	...	...	...	...	61,948	232,270	235,475	251,215	287,332
Stage Carriages	...	...	...	...	...	83,224	196,874	188,785	195,580	217,053
Hackney „	...	...	...	...	...	21,643	70,409	73,234	79,208	88,033
Sugar used in Brewing	...	...	...	...	...	...	...	...	...	153
Auction	294,836	282,863	305,340	82,718	...	...	...	...	...	...
Bricks	393,050	355,281	439,975	561,867	638,422	681,329	455,845	456,452	...	...
Glass	574,891	579,812	647,673	62,936	...	...	...	...	...	...
Vinegar	23,841	25,914	239	...	...	...	...	...	...	...
Totals	13,602,004	13,904,314	14,450,903	14,621,701	14,993,782	13,907,508	15,031,839	14,985,865	15,342,207	15,371,690

GUANO.

Parliamentary Return, April, 1852. (*Mr. Scholefield.*)

A Return of all Guano Imported into the United Kingdom in each Year from 1841 *to* 1851, *inclusive; distinguishing the Quantities Imported from each Country.*

Countries from whence Imported.	Quantities of Guano Imported into the United Kingdom.										
	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Norway	..	..	..	..	..	..	..	..	25	..	..
Prussia	..	..	..	..	..	15	..	..	..	..	..
Hanseatic Towns	..	..	..	..	..	..	..	..	..	62	45
Holland	..	..	..	..	..	..	..	..	..	..	87
Belgium	..	..	..	149	..	46	..	..	..	412	890
Channel Islands	..	..	..	..	105	160	156	..	..	..	..
France	..	..	..	1	..	..	..	..	477	1,086	10
Portugal, viz. Azores	..	..	..	..	..	..	..	..	..	114	..
Spain	..	..	..	20	..	..	..	16	..	..	197
—— (Canaries)	..	..	..	..	..	..	..	..	..	..	135
Italy	..	..	..	..	..	..	..	23	..	294	..
Turkish Dominions	..	..	..	..	..	64	..	..	..	..	..
Egypt	..	..	..	..	..	514	..	..	..	..	..
Western Coast of Africa	..	..	175	76,898	207,679	5,309	1,146	950	2,345	2,953	3,184
British Possessions in South Africa	..	..	..	253	46,848	4,718	184	..	767	2,626	6,183
Eastern Coast of Africa	..	..	..	..	..	48	..	..	1	..	..
Ascension	..	..	..	..	..	..	..	..	..	..	411
St. Helena	..	..	..	110	2,093	443	401	..	..	..	595
British Territories in the East Indies	..	..	..	600	307	900	..	..	..	..	..
West Australia	..	..	..	..	..	..	..	..	..	..	6,522
British North American Colonies	..	..	..	..	76	10	6	.	..	..	..
Demerara	..	..	..	..	..	174	..	..	..	..	..
United States of America	..	..	..	..	..	1,175	..	..	..	274	..
Mexico	..	..	..	..	..	..	..	..	..	325	220
Brazil	..	..	..	..	431	1,162	250	204	..	184	21
Buenos Ayres, or Argentine Republic	..	..	..	..	..	..	..	..	..	489	421
Oriental Republic of the Uruguay	..	..	..	..	..	228	21	..	..	..	..
Chili	819	6,167	1,234	9,743	11,656	10,430	10,574	6,029	4,311	6,224	10,165
Bolivia	2,062	14,231	1,589	16,475	14,101	2,692	1,668	3,136	..	1,212	6,719
Peru						22,410	57,762	61,055	73,567	95,083	199,732
Patagonia	..	..	..	..	..	38,181	10,223	..	1,945	5,587	7,359
South Whale Fishery	..	..	..	..	..	523	..	..	..	..	120
Other Parts	..	..	4	2	4	1	1	1	.	..	..
Total of the Quantities Imported	2,881	20,398	3,002	104,251	283,300	89,203	82,392	71,414	83,438	116,925	243,016

IMPORTS AND EXPORTS.

Parliamentary Return, March, 1852.

(*Mr. Cardwell*).

A Return of the Value of the Imports into, and of the Exports from, the United Kingdom, in each Year from 1822 *to* 1850, *inclusive, calculated at the Official Rate of Valuation, and distinguishing the Value of the Produce and Manufactures of the United Kingdom exported from that of the Foreign and Colonial Merchandise exported; also stating the Value of the Produce and Manufactures of the United Kingdom exported, according to the Real or Declared Value.*

Years.	Value of Imports into the United Kingdom, calculated at the Official Rates of Valuation.	Value of Exports from the United Kingdom, calculated at the Official Rates of Valuation.			Value of the Produce and Manufactures of the United Kingdom Exported, according to the Real or Declared Value.
		Value of Produce and Manufactures of the United Kingdom.	Value of Foreign and Colonial Merchandise.	Total Value of Exports.	
	£	£	£	£	£
1822....	30,531,141	44,242,532	9,227,567	53,470,099	36,966,023
1823....	35,798,433	43,826,607	8,603,905	52,430,512	35,357,041
1824...	37,468,279	48,730,467	10,204,785	58,935,252	38,422,404
1825....	44,208,803	47,150,690	9,169,492	56,320,182	38,870,945
1826....	37,813,890	40,965,736	10,076,287	51,042,023	31,536,723
1827....	44,908,173	52,221,934	9,830,821	62,052,755	37,181,335
1828....	45,167,443	52,788,089	9,946,546	62,734,635	36,812,757
1829....	43,995,286	56,217,962	10,620,165	66,838,127	35,842,623
1830....	46,300,473	61,152,354	8,548,394	69,700,748	38,271,597
1831....	49,727,828	60,686,364	10,745,126	71,431,490	37,164,372
1832....	44,610,546	65,025,278	11,044,870	76,070,148	36,450,594
1833....	45,944,426	69,987,357	9,833,753	79,821,110	39,667,348
1834....	49,364,733	73,835,231	11,562,037	85,397,268	41,649,191
1835....	49,029,334	78,360,059	12,797,724	91,157,783	47,372,270
1836....	57,296,045	85,220,144	12,391,712	97,611,856	53,293,979
1837....	54,762,285	72,544,071	13,235,497	85,779,568	42,069,245
1838....	61,258,013	92,453,967	12,711,512	105,165,479	50,061,737
1839....	62,048,121	97,394,666	12,795,990	110,190,656	53,233,580
1840....	67,492,710	102,706,850	13,774,165	116,481,015	51,406,430
1841....	64,444,268	102,179,514	14,723,373	116,902,887	51,634,623
1842....	65,253,286	100,255,380	13,586,422	113,841,802	47,381,023
1843....	70,214,912	117,876,659	13,956,288	131,832,947	52,279,709
1844....	75,449,374	131,558,477	14,398,177	145,956,654	58,584,292
1845....	85,297,508	134,598,584	16,279,318	150,877,902	60,111,082
1846....	75,934,022	132,312,894	16,296,162	148,609,056	57,786,876
1847....	90,921,866	126,131,029	20,040,979	146,172,008	58,842,377
1848....	93,547,134	132,619,154	18,376,886	150,996,040	52,849,445
1849....	105,874,607	164,539,504	25,561,890	190,101,394	63,596,025
1850....	100,460,433	175,416,709	21,893,167	197,309,876	71,367,885

POOR RELIEF.

Parliamentary Return, June, 1852.

(*Sir John Trollope.*)

A Return showing the Amount of Money expended for In-Maintenance and Out-Door Relief in Unions and Parishes in England and Wales during the Half-Years ending Lady Day 1851 *and* 1852, *respectively.*

Counties.	Number of Unions.	Number of Parishes.	Population in 1851.	Expenditure for In-Maintenance and Out-Door Relief for the Half-Years ending Lady Day,						Increase or Decrease in the Half-Year ending Lady Day, 1852, as compared with that of 1851.		Increase or Decrease per Cent.	
				1851.			1852.						
				In-Maintenance.	Out-door Relief.	Total.	In-Maintenance.	Out-door Relief.	Total.	In-crease.	De-crease.	In-crease.	De-crease.
ENGLAND.				£	£	£	£	£	£	£	£		
Bedford	6	135	129,789	2,987	12,885	15,872	2,638	12,601	15,239	..	633	..	4·0
Berks	12	236	199,154	7,561	23,519	31,080	6,663	21,535	28,198	..	2,882	..	9·3
Buckingham	7	192	143,670	4,017	19,906	23,923	3,505	19,016	22,521	..	1,402	..	5·9
Cambridge	9	173	191,856	6,019	27,559	33,578	5,836	26,588	32,424	..	1,154	..	3·4
Chester	9	467	397,173	3,523	23,955	27,478	3,534	24,241	27,775	297	..	1·1	..
Cornwall	13	217	354,035	4,412	25,363	29,775	4,308	24,538	28,846	..	929	..	3·1
Cumberland	9	200	195,487	3,294	11,821	15,115	3,538	12,198	15,736	621	..	4·1	..
Derby	9	264	260,707	2,636	11,678	14,314	2,519	11,109	13,628	..	686	..	4·8
Devon	17	447	448,992	7,048	50,738	57,786	6,305	48,304	54,609	..	3,177	..	5·5
Dorset	12	282	177,597	4,200	24,275	28,475	3,619	23,600	27,219	..	1,256	..	4·4
Durham	14	310	411,532	3,131	26,340	29,471	3,239	25,570	28,809	..	662	..	2·2
Essex	17	372	343,916	13,120	41,362	54,482	12,473	38,601	51,074	..	3,408	..	6·3
Gloucester	16	340	353,694	8,744	31,219	39,963	7,728	29,985	37,713	..	2,250	..	5·6
Hereford	8	238	110,765	2,309	13,478	15,787	2,088	13,175	15,263	..	524	..	3·3
Hertford	13	174	188,532	6,988	18,518	25,506	6,252	18,546	24,798	..	708	..	2·8
Huntingdon	3	87	60,320	1,741	7,879	9,620	1,645	7,485	9,130	..	490	..	5·1
Kent	27	410	605,110	21,581	45,391	66,972	20,199	43,050	63,249	..	3,723	..	5·6
Lancaster	28	454	2,093,640	32,882	98,528	131,410	32,507	94,469	126,976	..	4,434	..	3·4
Leicester	11	325	234,968	3,561	22,242	25,803	3,885	21,840	25,725	..	78	..	0·3
Lincoln	14	716	400,266	8,946	39,914	48,860	8,184	39,723	47,907	..	953	..	2·0
Middlesex	22	194	1,003,834	42,766	53,476	96,242	42,652	49,612	92,264	..	3,978	..	4·1
Monmouth	6	160	177,165	2,028	14,259	16,287	2,189	13,896	16,085	..	202	..	1·2
Norfolk	21	693	365,607	10,517	48,089	58,606	9,447	46,672	56,119	..	2,487	..	4·3
Northampton	12	323	213,784	4,795	27,628	32,423	4,144	26,561	30,705	..	1,718	..	5·3
Northumberland	12	538	303,535	4,108	30,251	34,359	3,957	30,029	33,986	..	373	..	1·1
Nottingham	9	293	294,438	4,033	18,856	22,889	4,162	18,477	22,639	..	250	..	1·1

Rutland	2	65	24,272	700	2,100	2,800	631	2,075	2,706	..	94	..	3·4
Salop	13	251	193,160	3,767	12,827	16,594	3,406	12,575	15,981	..	613	..	3·7
Somerset	17	490	461,985	9,396	57,282	66,678	8,319	54,851	63,170	..	3,508	..	5·3
Southampton	24	294	335,365	11,402	37,819	49,221	10,548	35,841	46,389	..	2,832	..	5·8
Stafford	16	251	524,026	7,781	24,177	31,958	7,218	23,307	30,525	..	1,433	..	4·5
Suffolk	17	513	335,991	10,866	41,579	52,445	9,727	40,781	50,508	..	1,937	..	3·7
Surrey	19	149	612,162	23,916	36,921	60,837	23,334	36,675	60,009	..	828	..	1·4
Sussex	20	275	240,006	9,781	29,002	38,783	9,141	28,487	37,628	..	1,155	..	3·0
Warwick	12	223	422,526	5,414	25,749	31,163	4,750	24,136	28,886	..	2,277	..	7·3
Westmoreland	3	109	58,380	1,046	4,623	5,669	1,084	4,268	5,352	..	317	..	5·6
Wilts	17	304	232,072	7,197	35,833	43,030	6,213	34,824	41,037	..	1,993	..	4·6
Worcester	13	263	385,882	5,273	26,240	31,513	5,327	24,910	30,237	..	1,276	..	4·0
York, East Riding	10	366	254,181	3,458	18,058	21,516	3,600	17,360	20,980	..	536	..	2·5
York, North Riding	15	477	189,000	2,324	16,137	18,461	2,385	15,821	18,206	..	255	..	1·4
York, West Riding	23	430	1,078,818	8,501	65,794	74,295	8,770	65,589	74,359	64	..	0·1	..
Totals of England	565	12,978	15,157,505	331,609	1,225,890	1,557,499	315,025	1,184,558	1,499,583	932	58,898	..	3·7
WALES.													
Anglesey	1	53	43,248	..	7,458	7,458	..	8,095	8,095	637	..	8·5	..
Brecon	4	108	59,162	844	6,445	7,289	855	6,430	7,285	..	4	..	0·1
Cardigan	5	106	77,394	256	8,242	8,498	274	8,337	8,611	113	..	1·3	..
Carmarthen	5	83	114,936	689	11,690	12,379	679	11,611	12,290	..	89	..	0·7
Carnarvon	4	85	94,668	554	12,685	13,239	588	13,112	13,700	461	..	3·4	..
Denbigh	3	94	71,531	1,127	7,615	8,742	1,065	7,234	8,299	..	443	..	5·1
Flint	2	30	66,342	605	8,140	8,745	531	8,253	8,784	39	..	0·4	..
Glamorgan	5	162	240,132	1,589	23,495	25,084	1,848	23,348	25,196	112	..	0·4	..
Merioneth	4	48	51,242	175	7,251	7,426	214	7,143	7,357	..	69	..	0·9
Montgomery	3	51	56,757	748	8,310	9,058	637	8,163	8,800	..	258	..	2·9
Pembroke	3	143	84,456	495	8,951	9,446	557	9,135	9,692	246	..	2·6	..
Radnor	3	46	19,763	295	2,907	3,202	177	2,778	2,955	..	247	..	7·7
Totals of Wales	42	1,009	979,631	7,377	113,189	120,556	7,425	113,639	121,064	1,608	1,110	0·4	..
Totals of 607 Unions &c. in England and Wales	607	13,987	16,137,136	338,986	1,339,079	1,678,065	322,450	1,298,197	1,620,647	2,590	60,008	..	3·4
										Total Decrease, £57,418.			

NOTE.—In-Maintenance consists of the Cost of Food, Clothing, and Necessaries supplied for the use of the Poor in the Workhouse. Out-Relief consists of Relief in Money and kind, together with Relief by way of Loan (if any), to the Out-door Poor.

The above Expenditure applies to 607 Unions and Single Parishes under the Poor Law Amendment Act, but does not include 490 parishes under Local Acts, Gilbert's Acts, and the 43rd of Elizabeth. The cost of maintaining irremovable poor is included in the above Return. Total Population of England and Wales, according to the Census of 1851, 17,922,768.

POST OFFICE.

Parliamentary Return, June, 1852.

(*Mr. Charles Villiers.*)

A Return of the Number of Chargeable Letters delivered in the United Kingdom in each Year from 1839 *to* 1851, *inclusive; also the Number of Franks in* 1839.

Years ending 31st December.	England and Wales.			Total, England and Wales.	Total, Ireland.	Total, Scotland.	Grand Total, United Kingdom.
	Country Offices.	London, Inland, Foreign, and Ship.	London District Post.				
1839	....	....	....	59,982,520	8,301,904	7,623,148	75,907,572
1839 (Franks)	....	....	....	5,172,284	1,054,508	336,232	6,563,024
1840	88,071,308	23,559,835	20,372,382	132,003,525	18,210,642	18,554,167	168,768,344
1841	103,395,677	27,966,722	23,108,722	154,471,121	20,794,297	21,234,772	196,500,191
1842	111,115,489	29,385,282	23,389,942	163,890,713	22,328,154	22,215,583	208,434,451
1843	117,704,474	30,908,743	24,881,410	173,494,627	23,482,463	23,473,216	220,450,306
1844	129,096,023	33,575,936	26,980,460	189,652,419	25,937,188	26,502,077	242,091,684
1845	147,227,431	36,097,711	30,828,486	214,153,628	28,587,993	28,669,168	271,410,789
1846	162,624,024	39,993,681	33,261,050	235,878,755	32,572,947	31,135,060	299,586,762
1847	175,023,407	43,757,540	34,630,817	253,411,764	35,473,316	33,261,163	322,146,243
1848	180,716,102	45,991,153	33,672,747	260,380,002	34,887,481	33,563,101	328,830,184
1849	187,382,329	45,845,683	33,960,398	267,188,410	35,463,913	34,746,876	337,399,199
1850	192,508,628	44,856,170	38,887,844	276,252,642	35,388,895	35,427,534	347,069,071
1851	199,746,304	47,819,499	40,585,952	288,151,755	35,982,782	36,512,649	360,647,187

A Return of the Number of Chargeable Letters delivered in the United Kingdom in each Week in which they were counted in 1851.

Weeks ending	England and Wales.			Total, England and Wales.	Total, Ireland.	Total, Scotland.	Grand Total, United Kingdom.
	Country Offices.	London, Inland, Foreign, and Ship.	London District Post.				
1851.							
21 January.....	3,880,400	911,433	772,419	5,564,252	713,921	684,610	6,962,783
21 February	3,991,202	914,740	834,225	5,740,167	725,146	752,047	7,217,360
21 March	3,822,199	910,265	815,420	5,547,884	694,438	700,038	6,942,360
21 April.....	3,669,612	867,461	705,207	5,242,280	670,460	676,883	6,589,623
21 May	3,714,882	949,905	784,421	5,449,208	675,046	681,374	6,805,628
21 June	3,742,641	954,385	830,538	5,527,564	678,770	697,377	6,903,711
21 July	3,871,256	981,900	835,077	5,688,233	687,372	701,368	7,076,973
21 August	3,819,870	993,396	702,956	5,516,222	680,820	704,596	6,901,638
21 September....	3,879,747	684,785	912,135	5,476,667	678,619	683,627	6,838,913
21 October.....	3,905,858	954,845	714,031	5,574,734	669,943	706,324	6,951,001
21 November....	3,869,288	930,231	695,252	5,494,771	698,259	716,260	6,909,290
21 December	3,928,346	981,923	764,308	5,674,577	730,925	721,492	7,126,994

A Return of the Gross and Net Post Office Revenue and the Cost of Management for the United Kingdom, in each Year, from 1838 *to* 1852, *inclusive, excluding any Advances that may have been made by the English to the Irish Post Office, and advances to the Money-Order Office; also disregarding any Old Debts written off, or Postage remitted, or any other Deductions relating to previous Years.*

Years ending 5th January.	Gross Revenue.*			Cost of Management.†			Net Revenue.			Postage Charged on the Government Departments.			Net Revenue, exclusive of Charges on the Government Departments.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1838	2,339,737	18	3	687,313	10	7	1,652,424	7	7	38,528	12	0	1,613,895	15	7
1839	2,346,278	0	9	686,768	3	6	1,659,509	17	2	45,156	0	11	1,614,353	16	3
1840‡	2,390,763	10	1	756,999	7	4	1,633,764	2	9	44,277	13	4	1,589,486	9	5
1841	1,359,466	9	2	858,677	0	5	500,789	8	8	90,761	3	2	410,028	5	6
1842	1,499,418	10	11	938,168	19	7	561,249	11	4	113,255	15	10	447,993	15	6
1843	1,578,145	16	7	977,504	10	3	600,641	6	4	122,161	8	9	478,479	17	7
1844	1,620,867	11	10	980,650	7	5	640,217	4	4	116,503	1	0	533,714	3	4
1845	1,705,067	16	4	985,110	13	10	719,957	2	5	109,232	13	5	610,724	8	11
1846	1,887,576	13	11	1,125,594	5	0	761,982	8	11	101,190	19	0	660,791	9	11
1847	1,963,857	9	9	1,138,745	2	4	825,112	7	5	100,354	19	0	724,757	8	5
1848	2,181,016	16	0	1,196,520	1	6	984,496	14	6	121,290	13	9	863,206	0	9
1849	2,143,679	19	6	1,403,250	13	2§	740,429	6	4	115,902	13	7	624,526	12	9
1850	2,165,349	17	9	1,324,562	16	10	840,787	0	11	106,923	18	0	733,863	2	11
1851	2,264,684	5	3	1,460,785	13	10‖	803,898	11	5	109,523	13	7	694,374	17	10
1852	2,422,168	4	1	1,304,163	12	8	1,118,004	11	4	167,129	3	7	950,875	7	9

* Namely, the gross receipts, after deducting the returns for "Refused Letters," &c.

† Including all payments out of the Revenue in its progress to the Exchequer, except advances to the Money-Order Office. Of these sums 10,307*l.* 10*s.* per annum is for Pensions, and forms no part of the disbursements on account of the service of the Post Office.

‡ This year includes one month of the Fourpenny Rate.

§ This includes a payment of 196,086*l.* 5*s.* 1*d.*, for the conveyance of mails by railway in previous years.

‖ This includes a payment of 192,975*l.* 13*s.* 11*d.* for the conveyance of mails by railway in previous years.

A Return of the Payments made by the Post Office in each Year from 1838 *to* 1852, *inclusive, for the Conveyance of the Mails by Railway in the United Kingdom, distinguishing the Payments for Work done within the Year from Payments for Work done in previous Years.*

Year ending 5th January,	For Work done in the Year.	For Work done in previous Years.	Total Payments.	Year ending 5th January,	For Work done in the Year.	For Work done in previous Years.	Total Payments.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
1838	1,312 13 11	321 15 0	1,743 19 11*	1846	71,013 12 9	108,893 13 9	181,111 5 5*
1839	12,623 1 10	240 10 5	13,007 13 9*	1847	75,615 11 0	33,850 3 2	110,430 19 4*
1840	48,250 6 5	4,479 14 9	52,860 8 8*	1848	82,259 10 9	38,261 2 9	121,859 18 4*
1841	51,317 19 2	483 7 6	52,362 18 6*	1849	120,855 2 0	196,086 5 1	318,631 7 6*
1842	86,018 15 7	9,299 12 3	96,190 4 6*	1850	128,713 11 2	99,583 11 0	230,079 5 10*†
1843	75,558 6 8	2,511 18 11	78,464 13 8*	1851	206,357 2 6	192,975 13 11	400,964 3 1*
1844	82,624 2 2	14,236 8 3	97,526 14 1*	1852	155,575 15 8	87,272 5 5	242,848 1 1
1845	63,221 15 3	28,087 19 3	92,493 16 10*				

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* The amounts marked thus (*) include certain sums (being the amounts paid by Postmasters) which do not appear in the preceding columns, as the payments for these services cannot be distinguished; the amounts, however, are not large.

† In addition to this amount, a sum of 25,000*l.* was paid to the Chester and Holyhead Railway Company on account; but the portion for the work done in previous years cannot be distinguished, the rate of payment not having been then fixed.

A Return of the Number and Amount of Money Orders issued and paid in the United Kingdom in each Year, from 1840 *to* 1851 *inclusive.*

MONEY ORDERS ISSUED.

Year ending 5th January.	England and Wales.		Ireland.		Scotland.		Total, United Kingdom.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
		£ s. d.		£ s. d.		£ s. d.		£ s. d.
1840.....	142,723	240,063 5 4	30,015	47,295 8 4	16,183	25,765 19 4	188,921	313,124 13 0
1841.....	482,764	802,827 16 8	53,507	77,167 9 2	51,526	80,980 4 5	587,797	960,975 10 3
1842.....	1,290,115	2,657,969 4 3	125,170	215,382 12 8	137,560	254,155 13 4	1,552,845	3,127,507 10 3
1843.....	1,767,626	3,709,778 12 2	169,910	295,878 8 11	174,444	331,520 14 3	2,111,980	4,337,177 15 4
1844.....	2,086,009	4,369,344 4 10	208,179	358,884 5 3	207,335	384,612 7 1	2,501,523	5,112,840 17 2
1845.....	2,333,693	4,858,885 14 9	232,525	391,692 9 9	240,585	444,817 2 10	2,806,803	5,695,395 7 4
1846.....	2,627,443	5,463,453 10 7	258,144	435,330 17 3	290,539	514,576 13 4	3,176,126	6,413,361 1 2
1847.....	2,881,699	5,926,473 13 11	299,521	519,877 1 5	333,859	624,706 0 11	3,515,079	7,071,056 16 3
1848.....	3,286,375	6,600,658 0 2	343,156	585,454 15 10	401,654	717,064 7 9	4,031,185	7,903,177 3 9
1849.....	3,468,823	6,861,803 13 0	359,043	604,192 13 8	375,785	685,298 13 0	4,203,651	8,151,294 19 8
Year ending 31st December 1849.....	3,515,839	6,880,865 11 2	358,578	592,504 14 3	374,474	679,273 12 1	4,248,891	8,152,643 17 6
1850.....	3,677,112	7,173,622 13 11	377,436	623,732 8 6	385,165	697,143 8 2	4,439,713	8,494,498 10 7
1851.....	3,878,497	7,518,060 14 1	392,848	653,359 19 5	389,680	709,000 2 7	4,661,025	8,880,420 16 1

Money Orders Paid.

Year ending 5th January.	England and Wales.		Ireland.		Scotland.		Total, United Kingdom.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
		£ s. d.		£ s. d.		£ s. d.		£ s. d.
1840.....	124,004	208,586 2 7	47,022	71,426 5 3	17,609	31,715 1 3	188,615	311,727 9 1
1841.....	429,600	739,963 18 2	89,388	120,950 11 7	50,900	83,372 17 3	569,888	944,287 7 0
1842.....	1,268,660	2,638,060 10 11	158,651	245,887 18 8	132,899	256,147 17 1	1,560,210	3,140,096 6 8
1843.....	1,734,423	3,687,458 10 10	191,172	297,156 12 1	179,301	348,993 9 0	2,104,896	4,333,608 11 11
1844.....	2,047,605	4,323,820 18 4	232,026	355,973 6 1	216,100	411,664 12 6	2,495,731	5,091,458 16 11
1845.....	2,271,979	4,822,208 2 5	263,070	398,061 4 11	247,070	469,821 11 5	2,782,119	5,690,090 18 9
1846.....	2,540,456	5,348,411 4 4	316,814	483,339 11 3	281,757	539,977 14 3	3,139,027	6,371,728 9 10
1847.....	2,798,682	5,816,084 12 7	395,014	611,320 0 8	316,107	616,692 10 3	3,509,803	7,044,097 3 6
1848.....	3,138,010	6,425,250 15 0	545,709	806,770 19 1	345,811	666,873 5 10	4,029,530	7,898,894 19 11
1849.....	3,384,088	6,816,573 10 1	470,842	665,523 8 10	348,508	670,389 10 8	4,203,438	8,152,486 9 7
Year ending 31st December 1849.....	3,419,861	6,844,633 5 7	476,259	644,430 10 9	349,232	669,292 17 8	4,245,352	8,158,356 14 0
1850.....	3,559,900	7,098,429 7 2	503,980	681,943 4 9	367,355	702,682 9 11	4,431,235	8,483,055 1 10
1851.....	3,743,803	7,432,162 6 2	531,514	721,713 5 0	382,126	722,366 17 9	4,657,443	8,876,243 8 11

The Commission on Money Orders was, on and from the 20th November 1840, reduced as follows:—
For any sum not exceeding 2*l.*, from 6*d.* to 3*d.*
For any sum above 2*l.*, and not exceeding 5*l.*, from 1*s.* 6*d.* to 6*d.*

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

SESSION 1851–2.

Eighth Ordinary Meeting. Monday, 21st June, 1852.

Lieut.-Colonel W. H. Sykes, Vice-President, in the Chair.

The undermentioned Gentlemen were elected Fellows of the Society, viz.—

Sidney Hanson, Esq., M.D. | George Parsons, Esq.
James Ebenezer Saunders, Esq.

The following Papers were read:—

1. On the Effect of the Remission of Taxes on the Revenue, in the thirty years from 1822 to 1851 inclusive. Communicated by Dr. Guy, one of the Honorary Secretaries.

2. On the Statistics of the Insane, Blind, Deaf and Dumb, and Lepers of Norway, by Professor Holst. Translated from the Danish by A. S. Oliver Massey, Esq.

3. On the Population of the Colony of British Guiana, as enumerated on the 31st March, 1851, being the substance of a Dispatch from Governor Barkly, presented to the Society by the Right Hon. Earl Grey, Her Majesty's late Secretary of State for the Colonies.

PROPERTY AND INCOME TAX.

Parliamentary Return, June, 1852.

No. 556.

A Return of the Income Returned or Assessed for the Property and Income Tax, under Schedule D, and the Net Amount of Tax received for each Year, from 1842 *to* 1851 *inclusive.*

Year ending 5th April.	Amount of Profits Returned.	Amount of Assessment.	Net Amount of Tax Received.
	£	£	£
1843	71,330,344	1,681,852	1,609,801
1844	65,028,640	1,581,540	1,526,377
1845	65,095,191	1,578,769	1,542,075
1846	70,292,122	1,717,423	1,683,189
1847	70,576,513	1,768,420	1,734,883
1848	70,191,630	1,754,363	1,698,064
1849	67,061,185	1,584,601	1,547,406
1850	64,933,632	1,570,781	1,529,611
1851	65,717,046	1,593,728	1,553,615

THE MARRIAGES, BIRTHS, AND DEATHS,

REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND,

For the Quarter ending the 31st of March, 1852,

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

THIS return comprises the births and deaths registered by 2,190 registrars in all the districts of England during the Winter quarter ending March 31st, 1852; and the marriages in more than 12,000 churches or chapels, about 3,228 registered places of worship unconnected with the Established Church, and 623 superintendent registrars' offices, in the quarter that ended December 31st, 1851.

The return of marriages is not complete; but the defects are inconsiderable, and approximative numbers have been supplied from the records of previous years.

The general results of the return are satisfactory; the marriages exceed the average number, the births are above, the deaths are below the average of the kingdom.

MARRIAGES.—90,936 persons were married in the last quarter of the year ending December 31st, 1851. In England the greatest proportion of marriages is always celebrated in the months of September, October, November, after harvest; and the numbers in the last season not only exceeded the marriages in the previous quarters of 1851, but those in the corresponding quarters of previous years. Allowing for increase of population, the proportion of marriages was slightly less than in the autumns of 1845 and 1850, but greater than in any other autumn since 1842. 1 in 58 of the persons living was married in 1851; or there was 1 marriage to every 117 persons living.

The marriages increased chiefly in London, Cornwall, Gloucestershire, Worcestershire, Warwickshire, Rutlandshire, Nottinghamshire, Lancashire, and North Wales. They declined in the Southern, South Midland, and Eastern counties; in Wiltshire and Devonshire, Cumberland, Westmoreland, and Monmouthshire. The increase was most striking in Reigate, Croydon, Maidstone, East Ashford, Faversham, Brighton, Falmouth, Taunton, Bristol, Gloucester, Wolverhampton, Birmingham, Derby, Preston, Hull, Durham.

Marriages, Births, and Deaths, returned in the Years 1840-52 *and in the Quarters of those Years.*

YEARS.....	1840	1841	1842	1843	1844	1845	1846	1847	1848	1849*	1850	1851	1852
Marriages	122665	122496	118825	123818	132249	143743	145664	135845	138230	141883	152235	153740	...
Births	502303	512158	517739	527325	540763	543521	572625	539965	563059	578159	593567	616251	...
Deaths	359687	343847	349519	346445	356933	349366	390315	423304	399833	440853	369679	395933	...
	MARRIAGES.												
Quarter ending the last day of													
March	26395	24447	25860	25285	26387	29551	31417	27480	28398	28429	30425	32619	...
June	30786	32551	30048	31113	34268	35300	37111	35197	34721	35844	39018	38498	...
September	29221	29397	27288	28847	31675	35003	35070	32439	32995	33874	37496	37155	...
December	36263	36101	35629	38573	39919	43889	42066	40729	42116	43736	45296	45468	...
	BIRTHS.												
March	132305	133720	135615	136837	143578	143080	145108	146453	139736	153772	144602	157354	161776
June	129059	129884	134096	131279	136941	136853	149450	139072	149760	153693	155727	159138	...
September	119822	123868	123296	128161	130078	132369	138718	127173	140359	135223	146970	150584	...
December	121117	124686	124732	131048	130166	131219	139349	127267	133204	135471	146268	149155	...
	DEATHS.												
March	98896	99069	96314	94926	101024	104664	89484	119672	120032	105871	98607	105446	106682
June	90339	86134	86538	87234	85337	89149	90231	106718	99727	102153	93005	99639	...
September	80822	75440	82339	76792	79708	74872	101663	93435	87638	135235	86044	91600	...
December	89630	83204	84328	87493	90864	80681	108937	103479	92436	97594	92023	99248	...

* The numbers up to 1849 have appeared in the Annual Reports.

The rate of marriage was high but stationary, or slightly declining, in Liverpool, Manchester, Leeds, and Sheffield.

Births.—The births of 161,776 children, born alive, were registered in the months of January, February, and March 1852. The number greatly exceeds the average of the season, which is generally the most prolific of the year. So many births were never registered before in the same time. London, the West Midland counties, Yorkshire, and the Northern counties, exhibit the greatest excess over their ordinary average.

Increase of Population.—As the births registered were 161,776, the deaths 106,682, an addition is made to the population in 3 months of 55,094 persons. This is the natural increase. During the same period, an army of 57,874 emigrants sailed from the ports of the United Kingdom at which there are government emigration officers; 51,999 of them sailed from three English ports; 8,438 from London, 1,798 from Plymouth, and 41,763, comprising an indefinite number of the Irish people, from Liverpool. 1,399 emigrants sailed from Glasgow and Greenock; 4,476 from Irish ports.*

The average price of wheat during the 3 months was 40*s.* 10*d.*, or 4*s.* higher than it was in the last three months of 1851, when more wheat was sold. The quantities of wheat and wheat flour entered for home consumption at the chief ports of Great Britain rapidly diminished in the three last periods from 91,040 to 47,986 and 27,540 quarters weekly. The price of potatoes at the waterside market, Southwark, was 70*s.* a ton, and ranged from 3*s.* to 4*s.* a hundred weight. The average price of mutton by the carcase ranged from $3\frac{3}{4}d.$ to $5\frac{3}{4}d.$; and has scarcely varied for 9 months. The price of the inferior beef rose from 3*d.* to $3\frac{1}{4}d.$ The average price of consols was $97\frac{1}{4}$.

The Average Prices of Consols, Wheat, Meat, and Potatoes, also the Average Quantity of Wheat sold and imported Weekly, in the three last Quarters ending the 31st of March, 1852.

Quarters ending	Average Price of Consols.	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns. (Average Number of Quarters Weekly.)	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain. (Average Number of Quarters Weekly.)	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase). Beef.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase). Mutton.	Potatoes (York Regents) per Ton at Waterside Market, Southwark.
1851 Sept. 30.	$96\frac{1}{2}$	40*s.* 7*d.*	74,714	91,040	3*d.*—5*d.* Mean 4*d.*	$3\frac{3}{4}d.$—$5\frac{3}{4}d.$ Mean $4\frac{3}{4}d.$	90*s.*—110*s.* Mean 100*s.*
Dec. 31.	$97\frac{7}{8}$	36*s.* 7*d.*	109,506	47,986	3*d.*—5*d.* Mean 4*d.*	$3\frac{3}{4}d.$—$5\frac{3}{4}d.$ Mean $4\frac{3}{4}d.$	65*s.*—75*s.* Mean 70*s.*
1852 Mar. 31.	$97\frac{1}{4}$	40*s.* 10*d.*	95,532	27,540	$3\frac{1}{4}d.$—5*d.* Mean $4\frac{1}{8}d.$	$3\frac{3}{4}d.$—$5\frac{3}{4}d.$ Mean $4\frac{3}{4}d.$	60*s.*—80*s.* Mean 70*s.*

Note.—The total number of quarters of wheat sold in England and Wales for the 13 weeks ending September 30th, was 971,276; for the 13 weeks ending December 31st, 1,423,582; for the 13 weeks ending March 31st, 1,241,921. The total number of quarters entered for Home Consumption was, respectively, 1,183,523; 671,803; and 358,024; the second total, however, embraces the returns of 14 weeks. The price of potatoes in the quarter ending September, refers to the period during which the old supply continued.

* From a return with which the Registrar-General has been favoured by the Emigration Commissioners.

State of the Public Health.—The mortality of England is highest in the winter quarter. Notwithstanding the peculiarities of the weather, the mortality in the past winter has been considerably below the average of the season. The annual rate of mortality in the winter quarter of 1852 was 2·364 per cent., which is less by 0·111 than the mean annual rate of mortality in the 10 previous winters. To every 22 deaths in previous winters, after allowing for increase of population, there were 21 deaths in the past winter, during which, as Mr. Glaisher has shown in his valuable account of the meteorology, the temperature was 3 degrees above the average.

The health of the districts comprising chiefly small towns and country parishes was considerably above the average standard; the towns exhibited less improvement, and lost a fourth part more of the population by death than the country districts.

In London 14,592 deaths were registered in the three months of January, February, and March; 14,481 in the thirteen weeks ending March 27th. Small-pox, scarlatina, and hooping-cough prevailed to a considerable extent. Influenza, bronchitis, and pneumonia were fatal to 40, 1,422, and 908 persons; whereas the deaths in the previous winter of 1851 from the same diseases were 205, 1,612, and 1,244. Consumption, on the other hand, was more fatal in the two last than it was in the two previous winters. Scurvy and purpura were only fatal to 10 persons. 527 persons died in the thirteen weeks of typhus. 62 women died of metria or puerperal fever; and 62 of other diseases incidental to child-bearing. 120 cases of erysipelas are recorded. Cancer is an example of great regularity in the mortality some diseases cause; in the five last winters the deaths from cancer were 222, 231, 213, 236, and 231. Deaths from diseases of the nervous system remained very uniformly the same. Diseases of the heart are returned in increasing numbers; to that cause 425 deaths were referred in 1848, and 603 in 1852. The increase is probably due to the advancement and diffusion of medical knowledge; for many of these deaths would in former years have been referred to dropsy. Nephria, or Bright's disease, has increased from the same cause. One of the most singular facts in the return is the increase of deaths by carbuncle; which from an average of about 2 rose to 17 in the quarter. 19 deaths were directly ascribed to intemperance, 29 to delirium tremens, 12 to privation, 64 to the want of breastmilk, 4 to cold, 23 to poison, 88 to burns and scalds, 76 to hanging and suffocation, 72 to drowning, 161 to fractures and contusions, 35 to wounds, and 11 to other violence.

South-eastern Division.—The mortality has declined sensibly in Berkshire and Hampshire. In the counties of Surrey, Kent, and Sussex, little or no improvement is visible. The mortality in the districts of Canterbury, Thanet, Eastry, Dover, Romney Marsh, Brighton, Chichester, Portsea Island, the Isle of Wight, and Reading, was greater than in corresponding quarters of previous years. Scarlatina, small-pox, and bronchitis have prevailed in several districts.

In the South-Midland Division, the mortality in Northamptonshire increased, while it decreased in all the other counties, and more particularly in Hertfordshire, Bedfordshire, and Cambridgeshire. Measles and small-pox occurred in some districts. Scarlatina and measles were fatal to children in Northampton. In the Luton sub-district 189 births and only 77 deaths were registered. "The deaths," says the Registrar, "are a little below the average. I believe it may be accounted for by the absence of any general epidemic, and the full employment of the labouring population, who are thus enabled to procure a good supply of the necessaries of life."

Deaths in the Winter Quarters (January, February, March).

	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	Total. 1842–51	1852
In 117 Districts, comprising the chief towns	44903	43748	46136	49996	43850	56105	57710	51017	46066	52333	491864	52408
In 506 Districts, comprising chiefly small towns and country parishes	51411	51178	54888	54668	45634	63567	62322	55052	52541	53113	544374	54274
All England ...	96314	94926	101024	104664	89484	119672	120032	106069	98607	105446	1036238	106682

Population, Deaths, and Mortality per cent. in the Winter Quarters of 11 Years, 1842-52.

	Population Enumerated		Deaths in 10 Winter Quarters, 1842-51.	Annual Rate of Mortality of 10 Winter Quarters, 1842-51.	Annual Rate of Mortality in the Winter Quarter, 1852.
	June 6-7th, 1841.	March 31st, 1851.			
In 117 Districts, comprising the chief towns	6,612,958	7,795,882	491,864	2·717	2·651
In 506 Districts, comprising chiefly small towns and country parishes	9,301,190	10,126,886	544,374	2·234	2·128
All England	15,914,148	17,922,768	1,036,238	2·475	2·364

The health of Cambridge continues unusually good, and the mortality in the last quarter was, as has not hitherto been the case, lower than the mortality of Oxford.

Districts of	Population in 1851.	Deaths in the Winter Quarters of 5 last Years.				
Cambridge	27,803	194	153	155	158	121
Oxford.....	20,173	113	111	94	146	115

The Registrar of St. Andrew, Cambridge, remarks that "the deaths are 10 less than in this period last year. Several are those of persons nearly 90 years of age, and several those of very young children. I consider there are very great improvements in the sanatory arrangements of the town, and a great increase of medical skill in operation upon the increasing population. Much credit is due to the medical profession for early information of nuisances, and to the Corporation for prompt measures to remove them."

In the Eastern Division, the mortality was near the average in Essex and below the average in Norfolk.

It is gratifying to find that in several cases the better health of the population is ascribed to sanatory measures. The Registrar of West Wymer, Norwich, says: "My sub-district is unusually healthy, and there is no prevalent epidemic at this time. I am of opinion that the sanatory measures which have lately been carried into effect have had a considerable share in producing this result; at the same time much requires to be done, and particularly as regards the low lodging-houses of this city, which ought to be immediately placed under proper regulations by the sanatory committe."

The mortality of the counties in the South-western Division differs little from the average, but exceeds it slightly. Scarlatina, small-pox, measles, or hooping-cough, prevailed in many districts of Wiltshire, Dorsetshire, Devonshire, Cornwall, and Somersetshire. The Registrar of Moretonhampstead notices that there were 21 births and 16 deaths in his district. He ascribes a decrease of 12 births to "emigration, and the want of employment in agricultural districts, which causes the inhabitants to leave for larger towns." In Plymouth, East Stonehouse, and Stoke Damerel the mortality was exceedingly high; the deaths in several sub-districts exceeded the registered births. Measles, scarlatina, small-pox, and fever prevailed to a great extent in this low region. In Crowan, Helston, the births were increased by the influx of labourers, for whom there was a great demand. In Glastonbury, Wells, the village of Street has a manufactury for shoes, slippers,

mats, &c., in consequence of which the population, says the Registrar, "increases, and consists principally of young men and women, who get married; hence arises an increase of births over the average." The decrease of deaths in Redruth, Cornwall, is "mainly attributed to the cheapness of provisions and the full employment of the population." Small-pox was brought to Bath by tramps from Keynsham, and would, it is believed, have spread rapidly, "had not vaccination been immediately resorted to, and urged upon parents without delay, which checked it in time."

Small-pox has prevailed very extensively; and the provision of gratuitous vaccination for the people, by the legislature, appears to be insufficient to stem its terrible progress. Several of the Registrars, who witness its effects, urge that many lives would be annually saved,—sickness, misery, and deformity prevented,—if vaccination were enforced by law. The grounds of objection, independently of negligence and apathy, lie generally in the ignorance, often in the prejudices, of the parents. These prejudices can be best and most permanently overcome by the persuasion and argument of zealous vaccinators, fortified as they will be by the experience of the neighbourhood, and such facts as the following, which cannot be too generally known:—

"One extraordinary case," says the Registrar of Tardebigg, Bromsgrove, "which shows most strongly the advantages and importance of vaccination, has occurred in my district:—A man residing in a rural part of this neighbourhood had five children, varying from 3 to 10 years of age; three of these had been vaccinated, the other two had not. The eldest was attacked by small-pox, but had it so lightly that he was confined scarcely a single day; the two next were not affected at all with the disease—these were the three that had been vaccinated. The two youngest were seized with the small-pox almost simultaneously, both died and lay dead in the house at the same time,—these were the two that had not been vaccinated."

Small-pox and typhus raged to a great extent in Nuneaton. Five of the deaths in Bulkington occurred near a place where there was a large pool of stagnant water; two of them occurred in one family, two in another, and one in a third. The Local Board of Health has now caused the pool to be drained. It would be a great progress, if, satisfied with the experience of Nuneaton, the local authorities would drain all such large stagnant pools of water in the country at once, before the lives of the people living in their neighbourhood are destroyed.

In the North Midland Division, the health of Lincolnshire, Nottinghamshire, and Derbyshire was better than usual. A mysterious case, which requires further investigation, is described minutely in a statement addressed to the Registrar of East Retford, which will be found in the notes. Derby suffered from small-pox.

In Lancashire and Cheshire the mortality shows a disposition to rise. Diseases of the respiratory organs prevailed in Liverpool; where two deaths from cholera, one after 3 days', and one after 12 hours' illness, were recorded. One death from cholera occurred in Lancaster, which experienced much sickness. Typhus is at present prevalent in Slaidburn, Clitheroe; 3 deaths out of 4 cases happened in one house, a low thatched building, almost without ventilation, and partly under ground. In well ventilated situations the disease has assumed a milder type.

The catastrophe at Holmfirth, Huddersfield, is noticed by the Registrar, who recorded 124 births and 97 deaths in the quarter:—"On the morning of the 5th of February, at 1h. 15m. A.M., the reservoir at Billberry in this district burst, and before 2 o'clock, 81 (as nearly as I am able to ascertain) human beings perished in the rushing torrent. Of these 47, viz., 22 males and 25 females, were registered in this district; 2 bodies are yet wanting."

Leeds and Hunslet were less healthy than usual. The births and deaths in Sheffield exceeded the average. The population is rapidly increasing. Vaccination has been greatly neglected, and in consequence small-pox has been prevalent and fatal.

In the Northern Division, the mortality exceeded the average in Durham, Northumberland, and Westmoreland. At Bedlington, Morpeth, ten persons were labouring under small-pox at the same time in one house; in another, 4 had typhus, of whom 2 died. Scarlatina was exceedingly fatal in Kendal.

The deaths in Monmouthshire, North Wales, were below, in South Wales above, the average of corresponding quarters. Scarlatina prevailed in the lower part of Shirenewton, Chepstow, where the land is low and marshy.

MORTALITY OF THE METROPOLIS.

A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending March of the Four Years, 1849–50–51–52.

CAUSES OF DEATH.	Quarters ending Mar. 1849.	1850.	1851.	1852.
ALL CAUSES	15,438	13,219	15,410	14,481
SPECIFIED CAUSES	15,331	13,136	15,323	14,399
I. Zymotic Diseases	4,120	2,126	2,999	2,702
SPORADIC DISEASES.				
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	643	606	631	605
III. Tubercular Diseases	2,282	2,226	2,472	2,588
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,687	1,638	1,634	1,625
V. Diseases of the Heart and Blood-Vessels	523	544	665	655
VI. Diseases of the Lungs and of the other Organs of Respiration	2,986	2,802	3,522	2,840
VII. Diseases of the Stomach, Liver, and other Organs of Digestion	792	763	815	819
VIII. Diseases of the Kidneys, &c.	164	165	156	194
IX. Childbirth, Diseases of the Uterus, &c.	123	122	106	112
X. Rheumatism, Diseases of the Bones, Joints, &c.	121	101	109	110
XI. Diseases of the Skin, Cellular Tissue, &c	15	24	22	40
XII. Malformations	48	43	42	50
XIII. Premature Birth & Debility	301	320	390	391
XIV. Atrophy	282	277	283	300
XV. Age	662	690	686	676
XVI. Sudden*	167	234	218	127
XVII. Violence, Privation, Cold, and Intemperance	415	455	573	565
I. Small Pox	228	95	275	389
Measles	173	303	363	151
Scarlatina	776	199	206	366
Hooping Cough	905	442	781	539
Croup	77	79	109	97
Thrush	38	25	34	34
Diarrhœa	284	207	223	225
Dysentery	42	43	30	28
Cholera	516	8	7	13
Influenza	53	38	205	40
Purpura and Scurvy	16	8	9	10
Ague	6	3	3	7
Remittent Fever	19	20	32	25
Infantile Fever†	4	11	18	14
Typhus	699	404	521	527
Metria, or Puerperal Fever, see Childbirth	112	60	47	62
Rheumatic Fever, see Rheumatism	8	21	19	18
Erysipelas	137	119	81	120
Syphilis	22	32	32	36
Noma or Canker, see Mortification	5	8	4	1
Hydrophobia	..	1	..	..
II. Hæmorrhage	53	55	45	63
Dropsy	248	214	231	220
Abscess	27	30	24	17
Ulcer	12	12	21	12
Fistula	4	3	7	3
Mortification	60	59	56	44
Cancer	231	213	236	231
Gout	8	20	11	15
III. Scrofula	74	72	87	131
Tabes Mesenterica	198	158	175	198
Phthisis or Consumption	1,630	1,626	1,792	1,811
Hydrocephalus	380	370	418	448
IV. Cephalitis	145	135	138	160
Apoplexy	314	376	314	296
Paralysis	326	366	280	316
Delirium Tremens	41	21	30	29
Chorea	1	7	2	3
Epilepsy	94	75	82	82
Tetanus	5	4	7	6
Insanity	22	19	32	28
Convulsions	561	482	572	551
Disease of Brain, &c.	178	153	177	154
V. Pericarditis	31	32	47	33
Aneurism	20	24	20	19
Disease of Heart	472	488	598	603
VI. Laryngitis	69	54	73	67
Bronchitis	1,271	1,284	1,612	1,422
Pleurisy	49	41	71	39
Pneumonia	1,202	1,011	1,244	908
Asthma	270	300	383	266
Disease of Lungs, &c	125	112	139	138
VII. Teething	150	139	194	178
Quinsey	26	17	18	8
Gastritis	20	28	18	19
Enteritis	101	88	87	83
Peritonitis	62	57	54	65
Ascites	19	30	33	32
Ulceration (of Intestines, &c.)	26	23	27	34
Hernia	39	37	40	46
Ileus	23	30	30	27
Intussusception	16	13	9	10
Stricture of the Intestinal Canal	8	14	9	10
Dis. of Stomach, &c.	79	76	64	84
Disease of Pancreas	..	..	4	..
Hepatitis	49	44	55	39
Jaundice	44	30	40	42
Disease of Liver	129	134	131	138
Disease of Spleen	1	3	2	4
VIII. Nephritis	7	6	9	7
Nephria (or Bright's Disease)	25	34	40	46
Ischuria	2	2	5	3
Diabetes	10	10	9	13
Stone	10	12	4	5
Cystitis	8	7	12	14
Stricture of Urethra	9	13	12	13
Dis. of Kidneys, &c.	93	81	65	93
IX. Paramenia	5	4	3	3
Ovarian Dropsy	16	16	8	12
Childbirth, see Metria	64	66	65	62
Dis. of Uterus, &c.	38	36	30	35
X. Arthritis	1	3	3	8
Rheumatism	66	60	60	60
Disease of Joints, &c.	54	38	46	42
XI. Carbuncle	1	2	3	17
Phlegmon	3	7	5	9
Disease of Skin, &c.	11	15	14	14
XVII. Intemperance	21	18	23	19
Privation	13	8	13	12
Want of Breast Milk, see Privation & Atrophy	28	40	56	64
Neglect	..	2	1	..
Cold, see Privation	4	1	4	4
Poison	15	20	29	23
Burns and Scalds	76	106	100	88
Hanging, &c.	36	45	71	76
Drowning	66	48	70	72
Fractures and Contusions	114	139	163	161
Wounds	26	19	34	35
Other Violence	16	9	9	11
Causes not specified	107	83	87	82

* Under the head of "sudden deaths," are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

† In the years previous to 1848, "Worms" and "Infantile Fever" were classed together. The former, of rare occurrence, is now placed to diseases of stomach, &c.

NAMES OF THE PLACES.	Mean Pressure of Dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean daily Range of Temperature.	Mean monthly Range of Temp.	Range of Temperature in the Quarter.	Mean Temperat. of Evaporation.	Mean Temperature of the Dew Point.	WIND. Mean estimated Strength.	WIND. General Direction.	Mean Amount of Cloud.	RAIN. No. of days on which it fell.	RAIN. Amount collected.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional weight required to saturate a cubic Foot of Air.	Mean Degree of Humidity.	Mean whole amnt. of Water in a Vertical Column of Atmosphere.	Mean Weight of a Cubic Foot of Air.	Height of Cistern of Baromr. above level of the Sea.
	In.	°	°	°	°	°	°	°	°					In.	Gr.	Gr.		In.	Gr.	Feet.
Jersey	29·816	43·8	67·0	31·0	10·9	28·0	36·0	41·8	39·2	2·1	S.W. & N.E.	5·0	40	7.4	3·0	0·5	0·852	3·5	548	85
Guernsey	29·771	44·1	58·5	33·5	8·0	20·7	25·0	42·2	39·7	1·7	S.W. & N.W.	5·2	39	7·4	3·1	0·5	0·862	3·6	546	123
Helston	29·740	43·9	67·0	29·0	12·3	29·0	38·0	43·1	40·6	2·2	W.S.W. & E.N.E.	6·1	48	9·7	3·2	0·5	0·885	3·7	545	106
Falmouth	..	45·3	66·0	30·0	12·4	29·3	36·0	..	..	1·6	S.W. & N.E.	7·1	44	10·0	..	..	..	..	..	120
Truro	29·777	44·8	66·0	26·0	12·9	32·7	40·0	42·1	38·5	0·9	S.W. & N.E.	5·9	44	10·6	2·9	0·7	0·806	3·4	546	55
Torquay	..	43·5	55·0	32·0	7·5	22·0	23·0	40·9	37·4	2·9	W. & N.E.	..	32	7·2	2·8	0·6	0·814	3·3	546	160
Ryde	29·774	41·3	70·0	21·9	12·9	35·0	48·1	40·2	37·0	0·2	S.W. & N.E.	5·9	24	7·1	2·8	0·4	0·863	3·2	549	110
Ventnor	29·797	44·7	64·0	29·0	9·3	28.0	35·0	..	38·7	..	S.W. & N.E.	..	36	5·0	2·9	0·6	0·809	3·4	545	150
Chichester	..	39·7	65·0	24·0	14·3	31·7	41·0	..	34·8	..	S.W. & N.E.	..	..	..	2·6	0·5	0·849	3·0	551	23
Southampton	29·737	41·9	64·2	26·8	14·5	30·4	37·4	39·9	37·0	0·5	S.W. & N.E.	5·6	37	7·9	2·8	0·5	0·844	3·2	548	60
Uckfield	29·795	41·3	72·0	17·0	16·1	31·3	55·0	38·4	34·3	1·0	S.W. & E.	5·7	..	7·5	2·5	0·7	0·795	3·0	550	180
Royal Observatory	29·777	41·4	68·4	21·3	14·1	35·7	47·1	38·6	34·7	..	S.W. & N.E.	..	30	4·7	2·6	0·5	0·845	3·0	548	159
Chiswell Street Brewery	29·781	43·4	66·5	27·0	11·5	33·2	39·5	41·1	36·8	..	.. ..	..	33	4·2	2·8	0·8	0·759	3·2	546	96
Hatton	29·683	40·8	67·8	19·0	14·3	38·4	48·8	38·5	..	2·1	S.W. & N.E.	5·1	31	4·9	2·6	0·6	0·815	3·1	549	77
St. John's Wood	29·768	40·2	65·0	22·5	15·2	35·5	42·5	38·0	34·9	1.6	S.W. & N.E.	7·3	39	4·8	2·6	0·5	0·774	3·0	549	150
Enfield	..	..	..	..	..	..	..	..	..	..	.. ..	..	28	4·5	..	..	..	..	..	..
Rose Hill	29·766	39·8	66·7	19·0	14·9	36·6	47·7	38·7	37·1	2·4	S.W. & N.E.	5·9	35	6·5	2·8	0·3	0·910	3·3	547	270
Thame	29·775	40·0	66·0	21·0	13·4	35·6	45·0	38·2	35·6	1·2	S.W. & N.E.	5·6	24	7·3	2·7	0·5	0·865	3·1	547	230
Radcliffe Observatory	29·794	40·7	65·4	20·0	13·5	35·8	45·4	37·9	33·9	2·3	S.W. & N.E.	6·4	40	6·9	2·5	0·6	0·801	2·9	548	210
Stone Observatory	29·728	40·1	65·0	22·5	12·9	36·2	42·5	37·7	34·8	1·0	S.W. & N.E.	5·7	31	5·7	2·5	0·6	0·768	3·0	545	320
Hartwell House	29·722	40·7	66·0	22·0	15·8	37·2	44·0	38·8	36·0	1·1	S.W. & N.E.	5·8	..	..	2·7	0·5	0·851	3·2	545	250
Hartwell Rectory	29·726	39·8	65·5	21·8	14·7	35·1	43·7	37·9	34·9	1·2	S.W. & N.E.	5·0	40	5·7	2·6	0·5	0·851	3·0	545	290
Aylesbury	29·789	40·1	64·0	18·0	16·9	37·0	46·0	38·1	34·9	0·9	S.W. & N.N.E.	5·9	33	6·4	2·6	0·5	0·852	3·1	546	294
Linslade	29·785	39·2	68·0	20·0	14·6	38·0	48·0	37·2	34·1	..	S.W. & N.E.	..	49	6·6	2·5	0·5	0·843	3·0	547	313
Cardington	29·762	40·0	67·5	19·5	15·2	37·5	46·0	37·8	34·7	1·1	S.W. & N.	5·9	31	4·8	2·6	0·5	0·843	3·0	549	100
Bedford	29·751	40·5	68·5	20·0	14·9	36·9	48·5	37·7	33·7	1·1	Variable.	5·3	40	5·2	2·5	0·7	0·804	2·9	549	100
Norwich	29·743	39·7	66·0	19·0	11·4	36·7	47·0	37·4	34·4	1·5	S.W. & N.E.	6·6	44	7·3	2·5	0·5	0·816	2·9	551	39
Grantham	29·754	39·8	67·7	21·3	11·6	34·1	46·4	37·5	34·1	..	S.W. & N.E.	6·6	40	4·7	2·5	0·6	0·823	2·9	548	190
Derby	29·709	40·6	64·0	22·0	13·2	33·0	42·0	37·5	33·1	..	S.W. & N.E.	..	40	6·5	2·4	0·7	0·783	2·9	548	100
Holkham	29·727	39·5	67·2	20·0	12·9	36·9	47·2	38·1	36·1	1·2	S.W. & N.E.	6·3	44	5·8	2·7	0·4	0·886	3·2	551	39
Highfield House	29·706	40·1	71·5	19·0	15·6	38·3	52·5	38·1	35·2	0·9	S.W. & N.E.	6·2	47	6·3	2·6	0·5	0·848	3·0	549	103
Hawarden	29·708	40·9	67·5	27·0	9·5	29·0	40·5	39·5	37·5	1·7	S.W., N.W., & S.E.	6·3	33	7·6	2·8	0·4	0·893	3·3	545	260
Gainsborough	29·733	39·9	68·0	24·0	13·5	34·7	44·0	37·5	34·0	0·8	S.W. & N.N.W.	5·2	38	4·0	2·5	0·6	0·811	2·9	551	30
Manchester	29·747	40·4	74·0	25·0	15·9	37·0	49·0	38·4	35·6	..	S.W. & N.W.	6·9	..	9·1	2·7	0·5	0·851	3·2	548	137
Wakefield Prison	29·762	40·2	74·0	21·0	15·6	38·7	53·0	37·5	33·9	2·2	W.S.W. & N.N.E.	6·6	52	6·5	2·5	0·6	0·795	2·9	549	115
Stonyhurst	29·714	39·5	66·5	25·1	12·4	32·6	41·4	37·6	34·8	1·2	S.W. & N.E.	7·1	39	17·0	2·6	0·5	0·845	3·0	543	381
York	29·718	38·7	66·0	20·0	14·2	34·7	46·0	36·6	33·8	..	S.W. & N.E.	..	25	3·6	2·5	0·5	0·835	3·0	551	50
Whitehaven	..	40·7	59·0	25·5	7·6	25·5	33·5	39·6	38·1	2·5	S.W. & S.E.	..	44	2·9	2·9	0·2	0·913	3·4	543	90
Durham	29·675	39·1	65·4	24·7	9·6	29·1	40·7	37·3	34·6	1·2	S.W. & W.N.W.	6·7	37	2·6	2·6	0·5	0·856	3·0	544	352
North Shields	29·753	38·8	64·0	26·8	7·8	29·0	37·2	37·8	36·5	2·2	S.W. & N.N.E.	6·0	57	3·3	2·8	0·2	0·933	3·1	551	124
Glasgow	29·614	40·2	60·5	26·7	7·9	26·7	33·8	38·5	36·1	..	.. ..	..	48	11·1	2·7	0·4	0·869	3·2	547	121
Dunino	29·569	37·5	65·0	22·0	10·6	31·0	43·0	35·7	33·1	2·1	S.W. & N.W.	3·9	27	7·4	2·4	0·5	0·856	2·8	546	250

The mean of the numbers in the first column is 29·741 inches, and it represents that portion of the reading of the barometer due to the pressure of air; the remaining portion, or that due to the pressure of water, is 0·227 inch; the sum of those two numbers is 29·968 inches, and it represents the mean reading of the barometer for the quarter at the level of the sea.

REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th July, 1851-52; *showing the Increase or Decrease thereof.*—(*Continued from page* 190.)

[From the "London Gazette."]

Sources of Revenue.	Years ending 5th July.			
	1851.	1852.	Increase.	Decrease.
	£	£	£	£
Customs	18,715,072	19,011,774	296,702	....
Excise	13,219,609	13,206,404	....	13,205
Stamps	6,040,249	6,002,860	....	37,389
Taxes	4,322,681	3,149,702	....	1,172,979
Property Tax	5,353,425	5,363,910	10,485	....
Post Office	891,000	1,041,000	150,000	....
Crown Lands	150,000	220,000	70,000	....
Miscellaneous	162,333	302,948	140,615	....
Total Ordinary Revenue	48,854,369	48,298,598	667,802	1,223,573
Imprest and other Moneys	655,396	595,004	....	0,392
Repayments of Advances	694,246	842,886	148,640	....
Total Income	50,204,011	49,736,488	816,442	1,283,965
Deduct Increase				816,442
Increase on the Year				467,523

Sources of Revenue.	Quarters ending 5th July.			
	1851.	1852.	Increase.	Decrease.
	£	£	£	£
Customs	4,318,218	4,502,164	183,946	....
Excise	3,419,810	3,443,516	23,706	....
Stamps	1,525,492	1,626,826	101,334	....
Taxes	2,045,231	1,503,707	....	541,524
Property Tax	976,881	1,056,991	80,110	....
Post Office	240,000	230,000	....	10,000
Crown Lands	30,000	60,000	30,000	....
Miscellaneous	91,241	202,189	110,948	....
Total Ordinary Revenue	12,646,873	12,625,393	530,044	551,524
Imprest and other Moneys	139,770	212,688	72,918	....
Repayments of Advances	123,409	216,652	93,243	....
Total Income	12,910,052	13,054,733	696,205	551,524
Deduct Decrease			551,524	
Increase on the Quarter			144,681	

Consolidated Fund Operations.—The total income brought to this account in the quarter ending 5th July, 1852, was 13,284,205*l.* The total charge upon it was 7,572,625*l.*, leaving a surplus of 5,711,580*l.*

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Second Quarter of 1852; *together with the Average Prices for the whole Quarter.*—(*Continued from p.* 191.)

Returns received at the Corn Office, Board of Trade.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
	Weekly Average	Aggregate Average of Six Weeks' regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending, 1852.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
April 3	41 7	42 4	29 9	19 4	32 3	30 0	29 7
10	41 4	42 2	29 4	19 7	32 8	29 11	29 2
17	40 10	41 11	29 1	19 4	33 6	29 10	29 11
24	40 4	41 6	27 8	19 3	31 7	30 3	30 2
May 1	40 6	41 1	28 5	19 9	31 0	30 0	29 4
8	41 1	40 11	28 1	19 8	30 8	30 5	30 5
15	41 3	40 11	28 3	19 10	30 0	31 0	29 2
22	40 6	40 9	27 10	20 1	30 5	31 6	30 9
29	40 5	40 8	27 11	20 1	30 0	31 7	27 2
June 5	40 7	40 9	27 5	20 8	30 6	31 6	31 0
12	40 11	40 10	27 6	20 0	29 8	31 10	31 2
19	40 9	40 9	27 5	20 2	30 7	32 0	31 9
26	40 10	40 8	27 6	20 0	31 0	32 4	31 9
Average for the Quarter	40 10	..	28 2	19 9	31 0	30 11	30 1

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th April, 5th May, and 5th June, 1852; *the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouse at the close of them.*—(*Continued from p.* 191.)

[From the "London Gazette."]

WHEAT.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1852.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th April	187,458	..	187,458	187,458	..	187,458	5,642	9	5,651
5th May	220,791	..	220,791	220,791	..	220,791	5,642	9	5,651
5th June	182,598	..	182,598	184,461	..	184,461	3,780	9	3,789

WHEAT-FLOUR.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1852.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th April	334,381	411	334,792	334,381	411	334,792	7	7	14
5th May	415,754	217	415,971	415,754	217	415,971	8	7	15
5th June	377,565	143	377,708	377,565	143	377,708	7	7	14

Fluctuations in the Stock and Share Market during the Months of January, February, and March, 1852.—(*Continued from p.* 95.)

Stocks and Shares.	Amount of Share.			Amount Paid.			Price on the 1st of			Highest Price during the Months of			Lowest Price during the Months of		
	Jan.	Feb.	March.	Jan.	Feb.	March.	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.									
Consols	...	...	...	...	...	...	95⅝	96 5/16	97 3/16	96⅞	97½	98⅞	95⅝	96⅛	97⅛
Exchequer Bills	...	...	...	...	...	...	57*s.* Pm	60½*s.* Pm.	62½*s.* Pm.	62*s.* Pm.	64*s.* Pm.	71*s.* Pm.	55*s.* Pm	53*s.* Pm.	60*s.* Pm.
RAILWAYS—															
Brighton	Stock	Stock	Stock	100 0 0	100 0 0	100 0 0	96½	95½	93½	99½	95½	99	96	93	93½
Caledonian	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	16½	15	16⅝	16½	16⅝	19¼	14⅝	14½	16⅜
Eastern Counties	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	6⅞	7⅜	7¾	7⅛	7⅛	9½	6¼	8	7⅝
Great Northern	25 0 0	25 0 0	25 0 0	25 0 0	25 0 0	25 0 0	18⅞	18⅞	18⅝	19	19⅛	20⅜	17⅞	18	18⅝
Great Western	100 0 0	100 0 0	100 0 0	100 0 0	100 0 0	100 0 0	87½	86½	86½	88⅛	89⅞	89¾	84	86¼	85¾
London and North-Western	Stock	Stock	Stock	100 0 0	100 0 0	100 0 0	117¾	117¼	117	118¼	120½	125	114	117	116½
Midland	Stock	Stock	Stock	100 0 0	100 0 0	100 0 0	58½	56¼	57¾	58½	59	65⅛	54	56	57⅝
Lancashire and Yorkshire	...	Stock	Stock	...	100 0 0	100 0 0	...	61¾	68½	...	69⅝	72⅛	...	61½	67
North Staffordshire	20 0 0	20 0 0	20 0 0	17 10 0	17 10 0	17 10 0	9½	8½	8⅞	9½	8⅞	9¾	8¼	8½	8⅝
South-Eastern	33 2 4	33 2 4	33 2 4	33 2 4	33 2 4	33 2 4	21⅞	20⅜	20⅛	22	20⅞	21½	19⅞	20⅛	19¾
South-Western	Stock	Stock	Stock	100 0 0	100 0 0	100 0 0	87	86½	85¼	87¼	88⅝	90	84	86⅛	85
York, Newcastle, & Berwick	Stock	Stock	Stock	25 0 0	25 0 0	25 0 0	18¾	17⅜	17⅜	18¾	18	19	16⅞	17⅜	17⅜
York and North Midland	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	23¼	21½	21¼	23¼	22	25½	20½	20¾	21⅛
Boulogne and Amiens	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	11¼	11	12⅛	11⅝	12	13⅜	10¾	10⅞	12⅛
Northern of France	20 0 0	20 0 0	20 0 0	16 0 0	16 0 0	16 0 0	18⅞	18⅛	19⅝	20⅜	19⅝	22	17¼ exin	18	19⅝
East Indian	20 0 0	20 0 0	20 0 0	18 0 0	18 0 0	18 0 0	21⅛	20⅞	21⅛	21¼	21⅛	21⅛	20⅜ exin	20⅞	20⅞

Average Price of Meat as sold in Smithfield Market in the Months of January, February, and March, 1852.—(*Continued from p.* 95.)

[From Returns sent to the Board of Trade.]

Description.	Jan.	Feb.	Mar.	Description.	Jan.	Feb.	Mar.	Description.	Jan.	Feb.	Mar.
	s. d.	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*
Inferior Beasts	2 10	2 10	2 10	Inferior Sheep	3 0	3 0	3 0	Coarse Calves	3 4	2 10	2 10
2nd class	3 4	3 0	3 0	2nd Class	3 6	3 6	3 6	Small Prime Calves	3 10	3 8	3 6
3rd class (Large Prime)	3 8	3 4	3 4	3rd do. (long coarse woolled)	3 10	3 10	3 10	Large Hogs	3 6	3 0	2 10
4th class (Scots)	3 10	3 6	3 6	4th do. (South Down)	4 2	4 2	4 4	Small Neat Porkers	3 10	3 8	3 8
				Lambs	...	...	...				

N.B.—Price of Meat at the rate of 8 lbs. Avoirdupois to the stone, sinking the offal.

Fluctuations in the Stock and Share Market during Months of April, May, and June, 1852.

Stocks and Shares.	Amount of Share.			Amount Paid.			Price on the 1st of			Highest Price during the Months of			Lowest Price during the Months of		
	April.	May.	June.	April.	May,	June.	April.	May.	June	April.	May.	June.	April.	May.	June.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.									
Consols	...	...	...	...	...	...	98⅝	99⅝	100½	100	100½	101 exd.	98¼	99⅛	100¼
Exchequer Bills	(March.)	(March.)	(March.)	...	...	...	69½*s.* Pm.	68½*s.* Pm.	79 Pm.	74	78*s.* Pm.	83*s.* Pm.	66	67*s.* Pm.	73*s.* Pm.
RAILWAYS—															
Brighton	Stock	Stock	Stock	100 0 0	100 0 0	Stock	99	104½	105	105½	105½	108	98½	102½	104¾
Caledonian	50 0 0	50 0 0	Stock	50 0 0	50 0 0	Stock	18⅞	20¾	38¼	21⅛	20⅞	44⅛	18¼	18½	37¼
Eastern Counties	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	20 0 0	9¼	9⅜	9⅛	9⅝	9⅜	10¾	9	8¾	9
Great Northern	25 0 0	25 0 0	Stock	25 0 0	25 0 0	Stock	19⅞	20½	81	20¾	20⅝	92½	19¾	19⅞	81
Great Western	100 0 0	100 0 0	Stock	100 0 0	100 0 0	Stock	88¾	92¾	91½	93	92¾	98	88	89⅞	91⅜
London and North-Western	Stock	Stock	Stock	100 0 0	100 0 0	Stock	123¾	124¾	122¼	125¾	124¾	130½	122⅝	121	121½
Midland	Stock	Stock	Stock	100 0 0	100 0 0	Stock	64½	70¼	68⅛	69⅝	70⅝	73¾	63½	65¾	66⅝
Lancashire and Yorkshire	Stock	Stock	Stock	100 0 0	100 0 0	Stock	71⅜	73¾	72	75	73¾	82⅞	70⅝	70⅜	71⅜
North Staffordshire	20 0 0	20 0 0	20 0 0	17 10 0	17 10 0	17 10 0	9½	10¼	11	10	11¼	11⅝	9⅜	10	10⅞
South-Eastern	33 2 4	33 2 4	Stock	33 2 4	33 2 4	Stock	21¾	22	69	22⅝	22	73¾	21½	20⅜	67¾
South-Western	Stock	Stock	Stock	100 0 0	100 0 0	Stock	89½	93¼	91¾	93½	93¼	97	88¼	90	91
York, Newcastle, & Berwick	Stock	Stock	Stock	25 0 0	25 0 0	Stock	18¾	18⅝	72	19¼	18⅞	75	18⅜	17½	70½
York and North Midland	50 0 0	50 0 0	Stock	50 0 0	50 0 0	Stock	24¾	25⅞	47	26¼	25⅞	52½	24	22¾	46
Northern of France	16 0 0	16 0 0	16 0 0	16 0 0	16 0 0	16 0 0	21⅞	23 exdiv	23½	25	23⅝	24⅝	21⅞	22¾	23
East Indian	20 0 0	20 0 0	20 0 0	18 0 0	18 0 0	18 0 0	21⅛	21⅞	22¾	21½	21¾	24	21	22¾	22⅝

Average Price of Meat as sold in Smithfield Market in the Months of April, May, and June, 1852.

[From Returns sent to the Board of Trade.]

Description.	April.	May.	June.	Description.	April.	May.	June.	Description.	April.	May.	June.
	s. d.	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*
Inferior Beasts	2 8	2 4	2 6	Inferior Sheep	3 4	2 8	2 10	Coarse Calves	3 6	2 9	3 2
2nd class	3 0	2 8	2 10	2nd class	3 8	3 0	3 4	Small Prime Calves	4 0	3 6	3 10
3rd class (Large Prime)	3 4	3 0	3 4	3rd do. (long coarse woolled)	4 0	3 6	3 8	Large Hogs	3 4	2 8	2 10
4th class (Scots)	3 6	3 4	3 6	4th do. (South Down)	4 4	4 0	4 0	Small Neat Porkers	3 10	3 6	3 8
				Lambs	5 6	5 0	4 6				

N.B.—Price of Meat at the rate of 8 lbs. Avoirdupois to the stone, sinking the offal.

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 3rd April, the 1st May, and the 5th June, 1852.—(Continued from p. 192.)

[From the "London Gazette."]

ISSUE DEPARTMENT.

	Weeks ending		
	3rd April, 1852.	1st May, 1852.	5th June, 1852.
	£	£	£
Notes issued	33,084,485	33,417,775	34,352,260
Government Debt	11,015,100	11,015,100	11,015,100
Other Securities	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion	19,051,110	19,384,400	20,318,885
Silver Bullion	33,375	33,375	33,375
Total	33,084,485	33,417,775	34,352,260

BANKING DEPARTMENT.

Proprietors' Capital	14,553,000	14,553,000	14,553,000
Rest	3,624,418	3,102,037	3,065,992
Public Deposits	7,687,708	3,194,817	6,119,961
Other Deposits	11,191,626	14,365,920	13,030,750
Seven-Day and other Bills	1,140,730	1,213,821	1,255,847
Total	38,197,482	36,429,595	38,025,550
Government Securities	13,567,593	13,338,023	14,174,572
Other Securities	11,720,843	11,022,332	10,697,573
Notes	12,397,030	11,585,615	12,666,945
Gold and Silver Coin	512,016	483,625	486,460
Total	38,197,482	36,429,595	38,025,550

COUNTRY BANKS.

Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks, by which issued in each part of the Kingdom, during the months ending 17th April, the 15th May, and the 12th June, 1852.—(Continued from p. 192.)

Banks.	17th April, 1852.	15th May, 1852.	12th June, 1852.
England—Private Banks	3,579,575	3,641,782	3,504,876
Joint Stock Banks	2,909,444	2,956,244	2,850,251
Scotland—Chartered, Private, and Joint Stock Banks	3,111,970	3,303,002	3,580,303
Ireland—Bank of Ireland, Private and Joint Stock Banks	4,552,858	4,616,109	4,517,917
Total	14,153,847	14,517,137	14,453,347

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

DECEMBER, 1852.

On the Productive Industry of Paris. Communicated by the late G. R. Porter, Esq., F.R.S., *Secretary to the Board of Trade.*

[Read before the Statistical Section of the British Association at Belfast, 2nd September, 1852.]

The successive Governments of France have, for a long time, kept on foot establishments charged with the collection of statistical information, and have been accustomed to publish, from time to time, the result of the labours thus bestowed. It would not be possible, with any presumable degree of accuracy, to determine the amount of influence which the knowledge thus acquired has exercised over the governments or legislatures of that country. To all outward appearance that influence has not been great, since the changes of system that might reasonably have been expected to follow from a better acquaintance with the condition of the various classes of the people have not been experienced; such changes as have occurred being clearly assignable to political, apart from scientific, causes.

However this may be, we may reasonably hope that a time will come in which the knowledge of facts, collected at various times, and under different circumstances, may be allowed to produce its legitimate fruits; and when the labours of those who have gone before may, in matters of statistical research, as well as in other branches of knowledge, show the way to their successors for reforming and improving, wherever needed, the faulty legislation which may have impeded the progress, and interfered with the well-being, of the great mass of the people.

The system of centralization for which France has long been, and still is, remarkable, and which has mainly confined to its metropolis whatever administrative talent existed in the country, has apparently been the cause of so little statistical information relating to the people generally having been rendered available; and may further be the reason of that little having presented so slight a claim to the confidence of men accustomed to the examination and the use of such researches. This remark, however, cannot properly be made to apply to those researches when their object should be confined to the facts and condi-

tions existing in Paris, where the ability to turn such knowledge to the best account would be found. But here another difficulty would present itself, in the magnitude of the undertaking which aspires to display, under all their aspects, and in a manner to promise utility, the multiform interests of so vast a community.

At various times the attention of the central government and of the municipal authorities of Paris has been directed to this important object, and it may be thought worthy of remark that the want of knowledge in this direction has been felt chiefly, and has then led to attempts at a remedy, after periods of public commotion, when the working classes are most subject to distress, and, consequently, when their condition most inspires fears on the part of rulers. In 1791 the municipality of Paris endeavoured to obtain the requisite information by inciting individuals to the inquiry, and calling for treatises which should point out the best means for remedying the then existing distress among the working classes. The object thus sought was not attained. Numerous essays were written on the subject, not any of which supplied useful information concerning the industry and trade of the city, the only one of those essays deemed deserving of remark having been a dissertation in favour of freedom of commerce.

After the rupture of the peace of Amiens, and when the enormous expenses caused by the war which Napoleon carried on against so many of the great military powers of Europe, had occasioned very deep distress among the industrial classes of France, and chiefly in its metropolis, more than one effort was made to arrive at an accurate acquaintance with the condition of the various industries of Paris, but without arriving at any result that could lead to the adoption of any beneficial measures. At one time the Minister of the Interior invoked, to that end, the aid of the Chamber of Commerce; but the points upon which he sought to be informed were so many, and the means of gaining such information would have called for such vast and expensive exertion, that the body addressed could not be led to embark in the undertaking. In 1807 the attempt was renewed from the same quarter and on a less extended scale, and the Chamber of Commerce was requested to make a return of the divisions of occupations to be found in various branches of production. The Chamber readily undertook the task, but the report which it made contained nothing precise in regard to the information sought, and the estimate it gave of the value produced, and the number of workmen employed upon different manufactures, were purely hypothetical.

The "Tableau de l'Industrie Française," by M. Chaptal, published in 1819, was compiled from returns collected throughout France in the time of the Empire. The object of the author was to show what progress had been made, since the revolution, in the application of science to the arts of life. His work contains but little statistical information, and has nothing in it that is special to Paris.

After the revolution of 1830 the various manufacturing and commercial interests of France were subjected to a severe crisis, from the evils of which the Government was very desirous of rescuing them. To this end a circular was addressed by the President of the Ministry of Commerce and Colonies, on the 4th of April, 1831, to the different Chambers of Commerce, containing, among others, the following inquiries:—

1. What was the more or less prosperous condition of manufacturing establishments and of trade at the beginning of 1830?
2. What changes have been experienced since the revolution of July?
3. What permanent and what accidental causes may be assigned to account for the evils experienced?
4. What means are supposed to be within the power of Government for removing, or, at least, for diminishing the effect of those causes?

The Chamber of Commerce of Paris, in order to ground its answers to these questions on the best information, called before it the most distinguished men engaged in the principal branches of trade and manufactures. The opinions given upon the greater part of the questions were nearly unanimous. They were, that since 1816, and during the peace that had been enjoyed, every branch of industry had experienced a marked development—that consumption had increased by reason of the reduction of price at which manufactured goods could be procured, but that, in some branches, production had outstripped demand—that political troubles, and the apprehensions that consequently seized upon capitalists, having put a stop to credit, parties who had thus over-produced could not avoid failure. In the means proposed for remedying the evil, a like degree of unanimity was shown. It was declared to be necessary to restore security, and thereby, confidence; to repress disorder in the streets, and to avoid everything that could lead to a foreign war. As regarded Paris, especially, it was urged that a measure which had long been in agitation should be favourably disposed of. This was the establishment of a Customs' *entrepôt*, or warehousing system, in the city; and this was accordingly adopted. Lastly, the attention of the Government was drawn to the advantages that would follow from an extension of foreign trade, through a revision of the existing tariff, and a change in the colonial system.

In the following year additional questions were proposed relating to the number of workmen actually employed in each branch of industry, compared with the number that had been so employed before July, 1830, and also relating to the rate of wages earned. To neither of these inquiries does it appear that any precise answers were returned. The Chamber of Commerce limited itself to the notice of a general tendency towards improvement, and to the mention of those branches of industry in which that tendency was the greatest.

Further attempts were made to procure the needed information in 1834, 1839, and 1841, but with so small a measure of success as to prove all but useless.

The work of M. De Chabrol, "Recherches Statistiques sur la Ville de Paris," contains some interesting documents; but these having been compiled at different dates, and embracing besides only portions of the subject, are not of any value as displaying the condition of industry, at any period, in the metropolis. It does not appear in what manner the information which is given was collected, nor what precautions were taken for properly estimating its correctness. The work, indeed, exhibits rather the produce of an experiment than the result of any regularly formed plan.

The industrial crisis which followed close upon the revolution of

February, 1848, was probably rendered more severe in its effects and more lasting in duration, by reason of the injudicious remedies employed for its counteraction. If, through previous inquiries, the means had been afforded for estimating, with any approach to correctness, the immensity of the matter with which it was then ignorantly attempted to grapple, and for comprehending all the varying circumstances and conditions of the classes with whose interests and habits it was sought to interfere, it is hardly to be conceived that any body of public functionaries could have allowed themselves to fall into the grievous errors which marked the proceedings of the Provisional Government of France towards the working classes in Paris, during the first days of the Republic in 1848. The evils resulting from those proceedings were not slow to show themselves, and as early as the 25th of May a decree of the National Assembly was passed, ordering that an inquiry, embracing the condition of agricultural and manufacturing labourers, should be instituted throughout the whole of the territory of the Republic—that this inquiry should be organised in each chief place of the canton, under the direction of the *Juge de Paix:*—that this functionary should be assisted by a commission or committee, composed of equal numbers of workmen and employers—that each description of industry should be represented in this commission by a delegate (either workman or employer,) who should be elected by his peers. The election of delegates was to take place within a week from the promulgation of the decree, and the inquiry, the execution of which was entrusted to the prefects of departments, was to be finished within a month, saving that in Algeria and the Department of the Seine two months were allowed. The ultimate direction of the inquiry was specially reserved to a Committee formed of members of the National Assembly.

This inquiry produced no useful result. A report of the Committee of the Assembly, made in December, 1850, eighteen months after the time fixed for making the returns, showed that among the 2,847 cantons into which France is divided, only 2,177 had made any report, and that it was most difficult to draw any precise statistical fact from such reports as were made. Nothing whatever was done in obedience to the decree by the Department of the Seine.

These slight notices are offered with the feeling that it is always useful to know of failures, and especially when the want of success can be traced to its more probable cause. In the various attempts which have been noticed, the cause of failure appears to have been the assigning of the task—one of no ordinary magnitude—to hands inadequate, from various causes, to its proper performance, loaded as the functionaries whom it was sought to employ already were with a multiplicity of affairs. It was at length seen, that to compile for the whole country a minutely detailed statistical display of its various interests and occupations, that should be worthy of credit, by means of any machinery which it was within the power of the Central Government of France to set in motion, was quite impossible. But it was thought that the same impossibility did not stand in the way of a body in whose province the work seemed more properly to fall. The Chamber of Commerce of Paris, recognising the importance of such a work at all times, and its especial value in the changing conditions of the country to which, of late years,

France has been subjected, appointed, after the revolution of 1848, a Committee of its members to conduct the inquiry, with the object of showing, by means of facts, without entering upon the discussion of principles or doctrines, the extent and the money-value of the various branches of industry carried on within the capital, the numbers employed in each branch, both as masters and as workmen,—the rates of wages,—the periods and durations of the dead seasons affecting different branches, and, comparing one year with another, to show the effects of a great political crisis upon the prosperity of the industrious classes. The members of that Committee, from whose report the foregoing remarks are chiefly derived, have well performed the task. The persevering industry of three years has enabled that body to produce a volume, for which, it is believed, no parallel could be found in any country. This volume, printed in the large quarto size, occupies, including the necessary tables, 1,460 pages, of which not one can be considered superfluous.

It will not be expected, or wished, that on this occasion, much beyond the ascertained results of the inquiry shall be offered. That inquiry was confined to the ascertaining of facts illustrating the productive industry of the capital, so far as the same is contained within the limits subject to the payment of octroi duties, *i. e.*, of duties collected by the municipal authorities upon articles consumed. Paris is the centre of the various commercial interests of France; the various great joint-stock associations of the country have there the chief seat of their direction; there, too, all the chief manufacturers throughout France have depôts of goods, and the commercial firms engaged in foreign commerce have their counting-houses. To collect the statistics of these various interests, if even it had been possible to do so, would have been to collect and exhibit, to a great extent, the commerce and industry of the greater part of the country. It was therefore determined to limit the task to the ascertaining and exhibiting of the manufacturing industry of the capital; in other words, to leave aside all that related merely to distribution, and to embrace only those matters which call for the industry of man in order to give to materials a different form, and to impart to them an additional value.

In the performance of the work thus undertaken, it was felt that if, as on former occasions, information had been sought only from the principal manufacturers in each branch of industry, nothing but vague and general information could have been collected. It was therefore determined to seek the needed information from every person working on his own account, whether the employer of workmen under him or not; and this plan was pursued so minutely, that, for example, the workmen who having capital sufficient to buy a few ounces of gilt copper, converted the same into false jewellery of the humblest kind, was required to contribute his quota to the general sum of information.

The inquiry was begun in the second half of the year 1848, when the facts relating to the productions and the trading, during the year 1847, of every person to whom application was made, were sufficiently recent to be within the memory of each. Future inquiries made of the same parties, brought to light the amount of production and the circumstances affecting the industry in which they had individually been employed through the following year, 1848. The members of the

Chamber of Commerce express themselves, in their report, satisfied that they succeeded in inspiring those of whom they sought information with such a degree of confidence in their object, as made them willing to answer the inquiries in good faith, it being understood that in no case was the name of any individual to be divulged.

The inquiries were mostly comprehended under the following heads:—

The nature of the manufacture.

The importance of the manufacture in 1847, and the reduction of the value experienced therein in 1848.

The number of workmen employed, whether stationary in the factory or in the dwelling-house of the employer, or in their own single chamber.

The number of workmen not stationary, that is, employed sometimes in one and sometimes in another locality, such as masons, carpenters, and the like.

The number of boys from 6 to 12 and from 12 to 16 years old.

The number of girls at the same ages.

The number of apprentices comprised among the foregoing, and the general conditions of apprenticeship.

The number of unemployed workpeople in the four months of March, April, May, and June, 1848.

The daily earnings of men, whether paid in fixed wages or by the piece.

The same particulars regarding women, children, and young persons not apprentices.

The time and duration of the dead season experienced in different branches of industry.

The general habits and modes of life of workpeople; and, as regards textile fabrics, their nature and the number of looms in use.

Following this plan, a complete census was taken of the labouring and manufacturing population, distinguishing the individuals in classes, according to their station, whether as employers or employed, and also distinguishing those who worked for their own account without employing others at wages. To insure the completeness of the returns, every house in the city, which comprises more than 32,000, was visited. Paris is divided, for the purposes of municipal government, into twelve *arrondissements*, and each arrondissement is subdivided into four quarters, an arrangement of which advantage was taken in pursuing the inquiry, which was entrusted, under proper control, to paid agents. Each one of these agents was sent forth in the morning, with verbal and written instructions, to the streets and houses contained in a list furnished to him, together with blank forms, in which were to be entered the name and residence of the person questioned and the answers obtained.

The instructions with which the agents were furnished were very minute and precise; and although they were, doubtless, well calculated, —as indeed is shown by the result—to answer the end proposed, there would be little use in repeating them here, or, indeed, in offering them as a pattern for the conducting of the like inquiries elsewhere, under social arrangements so widely different as those of Paris are to such as exist in any other great city.

The information thus obtained was subjected to a very close examination, a task which was facilitated by the extent of the work, since this afforded better means for comparing one district or industry with another. If, in the course of the examination, it was made to appear that any serious differences existed between several returns where similarity was to be expected, a fresh examination on the spot was always made, and to help the members of the Committee in this important part of their labour, a certain number of returns applying to each branch of industry were, in the first instance, subjected to the most careful investigation. In point of fact, it was found necessary to subject a large proportion of the individual returns made by the agents to this revision.

By means of the plan described of collecting the required facts according to the divisions for municipal government of the city, a complete topographical chart of Parisian industry was obtained. It is now accurately known where the different branches of manufacture are chiefly located, and the number of workmen who inhabit the different arrondissements, with their rates of wages, and other circumstances attending on their condition,—information of no small importance during times of political trouble, or under any other kind of public calamity.

It will be seen, on referring to the tables hereafter given, that the money-value of the products of industry, in proportion to the number of persons employed, varies greatly in the different quarters of the city, which fact must not, however, be taken in itself as an indication of the condition generally of the inhabitants of the different quarters. Thus, in the ninth arrondissement, the number of employers and workmen respectively, 3,153 and 10,273, (together 13,426,) produced in the year 1847 articles valued at 1,596,152*l.*, or less than 120*l.* for each, while in the second arrondissement 6,459 employers and 33,998 workmen produced goods valued at 7,106,748*l.*, or more than 175*l.* per head. The first-mentioned of these arrondissements is in the centre of the city, near to the Hotel de Ville, and is chiefly occupied by retail shops; and such manufactures as are carried on are mostly the products of individual industry; two-thirds of the number set down as employers working either alone or having only one person to help them. The second arrondissement, where only two-fifths are thus set down, occupies a part of the city more favourable for manufacturing industry, and the average value of manufactures to each employer, is double that produced in the ninth arrondissement.

The sixth arrondissement is the principal manufacturing quarter of Paris, in which are chiefly produced the various things comprehended under the general name of "Articles of Parisian Industry." A list of these articles, which are very numerous, is appended to this paper. It will be seen, that in this sixth arrondissement are employed the largest number of workmen, and that the value of the productions, nearly nine and a-half millions sterling, greatly exceeds the value produced in any other of the divisions of the city.

The number of persons who furnished answers to the inquiries of the Committee as working on their own account, was 64,816. The number of workmen employed under them was returned as 342,530, viz., 204,925 men, 112,891 women, 24,714 children and young per-

sons. Of this number 8,141 were said to be not permanently located or employed in Paris; but there is reason for believing that this number is understated. The practice of hiring men to supply a temporary demand for labour in some branches of industry, and particularly in those connected with building, renders it difficult for employers to speak with certainty on the subject.

The 24,714 children and young persons comprised—

16,863 Males —of whom 1,249 were under 12 years of age,
15,614 were between 12 and 16 years old.
7,851 Females—of whom 869 were under 12 years of age,
6,982 were between 12 and 16 years old.

Of the whole number 19,078 were apprentices; but these did not comprise all who were under that condition, apprenticeship sometimes being continued, as in this country, until the person is of full age. In some cases, where bodily strength is a requisite for the performance of the art to be acquired, the season of apprenticeship does not begin until the person has attained to an age beyond 16, and in such cases the contract is made for only a short period—two, or at most, three years.

Of more than 18,000 apprentices, whose terms of service were ascertained—

247 were bound until they should attain the age of 21.
40 were bound until they should attain the age of 18.
1,419 were bound for an indeterminate time.
3 were bound for 9 years.
4 ,, 8 ,,
2 ,, 7 ,,
73 were bound for 6 years.
3 ,, 5½ ,,
1,459 ,, 5 ,,
26 ,, 4½ ,,
4,434 ,, 4 ,,
228 ,, 3½ ,,
5,482 ,, 3 ,,
336 ,, 2½ ,,
3,501 ,, 2 ,,
and the remainder for various periods less than two years.

666	were provided with	board, lodging, washing, and clothing.
379	,,	board, lodging, and clothing.
3,087	,,	board, lodging, and washing.
6,545	,,	board and lodging.
22	,,	board and clothing.
370	,,	board only.
7	,,	lodging and clothing.
1	,,	lodging, washing, and clothing.
128	,,	lodging only.
1	,,	breakfast only.
6,960	,,	neither board, lodging, washing, nor clothing.
18,166		

From these particulars the fact is easily inferred, that the contract of apprenticeship, in many instances, is not considered very binding upon either party; and, as a consequence, it is found that masters, having no certain prospect of deriving advantage from the labour and skill of their apprentices towards the close of their term, are but little disposed to give themselves the trouble of teaching their art at its commencement. Among the whole number above described (18,166), only 242 had paid any premium or apprentice-fee to their masters. On the other hand, 4,731, or more than one-fourth, were in the receipt of

wages from their employers; and among these 2,721 were in the enjoyment of some or all of the advantages mentioned above.

The total value of the manufactures produced within the City of Paris in the year 1847 was ascertained, in the manner already described, to amount to 1,463,628,350f., equal to 58,545,134*l.* sterling, in which amount is included the cost of the materials employed, which, of course, forms a very large proportion of the whole. For example, the 500 butchers, with their 1,429 assistants, are set down as creating a value of 2,995,737*l.*, or 1,553*l.* on the average for each. The average wages of the assistants are given as 3·50f. per day, which, supposing them to be paid for seven days in each week, amount to 72,822*l.* per annum, thus leaving to each master-butcher 5,845*l.* wherewith to purchase the animals which he slaughters, to defray the expenses of his trade other than wages, and to yield him a profit. Under the regulations of the city, which give the monopoly of this trade to a limited number of persons, the profits are known to be unduly great, so that the goodwill of the business is always saleable for a large sum; but making due allowance for this, it must be evident that a large part of the receipts from his customers must be employed in the purchase of the articles wherein he deals.

It must be evident that a large proportion of the sums received by jewellers and workers in precious metals is derived from the value of the materials which they employ, while those who are engaged in other branches of industry, the materials for which call for but little money outlay, will each receive only a very moderate sum in the course of the year. Laundresses, for example, who have no materials to provide beyond those which may be classed among their trade expenses, acquire yearly on the average, of both employers and assistants, an amount equal to about 35*l.* sterling, or 13*s.* 6*d.* per week, which is divided into not quite 20*s.* per week for the employers, who pay rent and all other expenses, and about half that rate for their assistants.

The average weekly earnings of assistants in twenty-six principal branches of industry in Paris, reckoning that they are fully employed during six days in the week, are as follow, stated in English money:—

	£	*s.*	*d.*
Tailors	0	17	0
Butchers	0	16	9
Jewellers	1	7	3
Bakers	0	16	9
Shoe-makers	0	14	2
Carpenters and Joiners	1	3	6
Silversmiths	1	3	9
Lace-makers	0	9	1
Cabinet-makers	0	17	0
Masons	0	16	1
Locksmiths	0	18	4
Linen Garment-makers	0	16	2
Sugar Refiners	0	15	6
Curriers	1	0	5
Carpet-makers	1	0	9
Coach-builders	0	19	3
Confectioners	0	18	8
Bronzists	1	0	4
Hat-makers	1	0	7
House Painters	0	18	10
Printers	1	1	4
Glove-makers	0	19	7
Milliners	0	17	4
Laundresses	0	10	6
Piano and Harp-makers	1	3	3
Artificial Flower makers	0	18	1

These are the average wages of males and females of all ages and degrees of ability. In some branches of industry the range of wages from the highest to the lowest is very wide. Thus tailors receive, according to their proficiency, from 8 francs to 75 centimes daily; butchers and bakers from 7 francs to 1 franc; jewellers, a craft in which the degrees of ability possessed differ very greatly, receive some as high as 15 francs, or 12*s.* per day, while others earn only 1 franc, or less than 10*d.*

In the list just given, it appears that the persons employed in making harps and piano-fortes earn less average weekly wages than carpenters and joiners. This arises from the fact that the *average* ability of the latter is necessarily greater than that of the workmen employed in making musical instruments, among whom some few gain from 10f. to 20f., or 7*s.* 6*d.* to 15*s.* per day, while others receive only 1·25f., or 1*s.* per day; the wages of carpenters running from 8f. the highest, to 2·50f. the lowest, or from 6*s.* 6*d.* to 2*s.* sterling money. Various explanations might be given which would account for other seeming anomalies in the list, but it is not possible within the limits to which this abstract must be confined to enter more fully into such details. It appeared necessary to give these few words of explanation lest it should be imagined that the inquiry had been conducted without a proper regard to accuracy, or that some error had crept into the abstract now offered. In a general table of wages paid to adult persons engaged in each of the thirteen groups of industrial employment in Paris, and which is given in an Appendix, it will be found that the earnings are these:—

	Males.	Females.	Total.
Earning less than 60 centimes or 5¾*d.* daily....	....	950	950
,, 3 francs or 2*s.* 4½*d.* ,, ...	27,453	100,050	127,503
,, 5 francs or 4*s.* ,, ...	157,216	626	157,842
Earning more than 5 francs or 4*s.* ,, ...	10,393	....	10,393
	195,062	101,626	296,688
Paid by the week, month, or year, and belonging to families of employers	9,863	11,265	21,128
	204,925	112,891	317,816

In another table will be found the number of persons, divided into employers and employed, males and females, adults and children, who are engaged in each of the same thirteen groups, together with the value in each group of the finished products given by them to commerce, the whole numbers being—

Employers		64,816
Employed, viz., Adult Males.....	204,925	
Adult Females	112,891	
Male Children	16,863	
Female Children	7,851	
		342,530
Total.....		407,346

It is calculated that among the 342,530 workmen and workwomen, as many as 186,405 were thrown out of employment during the four months that immediately followed the revolution in 1848. The degree in which this calamity affected employment in each of the thirteen groups, is thus stated by the Committee of the Chamber of Commerce:—

	Number of Workmen.		Diminution per Cent.	Diminished Value of Goods produced, per Cent.
	1847.	1848.		
Preparation of Food	10,428	8,404	19	34
Building	41,603	14,812	64	66
Furnishing	36,184	9,832	73	75
Clothing	90,064	44,051	51	52
Spinning and Weaving	36,685	17,233	53	57
Leather	4,573	2,754	40	33
Saddlery, Coach and Harness-making	13,754	7,168	47	46
Chemicals and Earthenwares	9,737	5,212	46	45
Metals, Machinery, and Hardwares	24,894	10,408	58	64
Plate and Jewellery	16,819	7,163	57	63
Turnery and Baskets	5,405	2,905	46	51
Articles of Parisian Industry	35,679	17,233	52	53
Paper, Printing, and Engraving	16,705	8,950	46	47
	342,530	156,125	54	54

It will be seen that the political movement of 1848 caused a diminution in the value of articles produced, to the extent of 54 per cent.; the falling-off being in no case less than 33 per cent., or one-third, and reaching in one branch to 75 per cent., or three-fourths The degree in which each of the thirteen groups was affected was as follows :—

	Amount of productions.		Diminution per Cent.
	1847.	1848.	
	£	£	
Preparation of Food	9,074,523	6,032,479	34
Building	5,816,507	2,006,802	66
Furnishing	5,485,810	1,388,656	75
Clothing	9,637,892	4,592,072	52
Spinning and Weaving	4,232,739	1,831,319	57
Leather	1,670,519	1,120,560	33
Saddlery, Coach and Harness-making	2,094,287	1,124,262	46
Chemicals and Earthenwares	2,981,864	1,634,702	45
Metals, Machinery, and Hardwares	4,145,264	1,486,628	64
Jewellery and Plate	5,393,211	1,986,312	63
Baskets and Turnery	819,292	401,424	51
Articles of Parisian Industry	5,146,351	2,401,209	53
Paper, Printing, and Engraving	2,046,875	1,094,539	47
	58,545,134	27,100,964	54

We find, as might be expected, that the evil fell most heavily upon those branches of industry which minister chiefly to the luxuries and conveniences of life, and lightest upon those employed in providing for its necessities. Building fell off two-thirds, and doubtless would have been more seriously affected, but for the necessity of completing works already in progress. In providing new furniture for dwellings, only one-fourth of the amount expended in 1847 was disbursed in

1848, while even in the articles required for the daily meals of the people, there was a falling off equal to one-third.

The regulations under which the trade of a butcher is carried on in Paris, are such as admit of a pretty minute examination of its circumstances and extent at various times. This trade had been placed under restrictions as regards the number allowed to engage in it, from the time of Philippe Augustus to the revolution. These restrictions were removed in 1791, when the number of butchers in Paris was 230, some of whom had two or more shops in different quarters of the city. From that time until September, 1802, the trade remained perfectly free, but it was then again subjected to limitation. At this time the number of persons allowed to carry it on is 400, but as permission is given to the widows or children of such of them as die to continue the business, the number has for some time been 501. The trade thus privileged with a monopoly is very profitable, so that the sale of a shop which is licensed for the business, usually brings a considerable sum to the retiring owner. By means of the octroi or town duty, which is collected upon all meat sold in Paris, whether slaughtered in the city or brought in killed, the quantity consumed is known with accuracy. It may be worthy of remark, that although for a few months following the revolution in 1848, the octroi duty (about a halfpenny per lb.), was suppressed, no reduction ensued in the price of meat, the retailers assigning as a justification for keeping up the price, the disordered condition of every branch of industry, which deprived them of customers for the skins, horns, tallow, or other offal; so that they were obliged to recover the cost of the animals slaughtered, together with their trade expenses and profits, from the sale of the meat alone.

The sales of the Paris butchers, which in 1847 amounted to 2,995,737*l.*, fell in 1848 to 1,827,400*l.* There were killed in each of those years :—

	1847.	1848.
Oxen	82,521	75,163
Cows	24,994	19,139
Calves	83,580	74,497
Sheep	503,117	442,322

The weight was, in 1847, 53,533,097 kilogrammes, or 118,040,478 lbs.; in 1848, 30,334,334 kilogrammes or 66,887,206; and the population of Paris being 945,721 souls, the consumption per head consequently was, in 1847, 125lbs.; in 1848, 70¾lbs.

In 1849 the average consumption per head again advanced to 121lbs.; and in 1850 reached 129lbs. These quantities are exclusive of pork and other articles of animal food, known in France under the general name of *Charcuterie*. The quantity of them were—

In 1847....24,098,621 lbs.,	equal to	25	lbs. per head.
1848....16,426,570	,,	17	,,
1849....24,502,304	,,	25	,,
1850....27,321,553	,,	29	,,

making the whole consumption of animal food in Paris (exclusive of Irish poultry and game)—

In 1847.....	150	lbs. per head.	In 1849..... 146 lbs. per head.
1848.....	87¾	,,	1850..... 158 ,,

The difference between 1847 and 1850 may be in part attributed to the increase of population.

Not having in this United Kingdom any octroi duties, there are not any means for comparing the consumption of Paris with that of any of our great cities. An account is indeed kept of the number of animals brought for sale to Smithfield, the (hitherto) great London market; but an undefined portion of these are driven away for the supply of neighbouring towns; while, on the other hand, a great and increasing but unknown quantity of slaughtered meat finds its way to the metropolis for consumption by railways and steam-vessels.

The statement last offered, showing the lessened value of the articles produced in 1848, as compared with the value in 1847, does not afford an adequate view of the intensity of suffering inflicted by the events of February, in the latter year, on the working population of Paris. During the months of January and February, there had been experienced more than the usual degree of activity in trade and manufactures, and again towards the close of the year business began to assume more of its usual appearance, so that many of the 186,000 workmen who were thrown out of employment in the four months from March to June inclusive, again found work. It is stated in the volume whence these particulars are drawn, that the number thus unemployed would have been even greater than it was, but for the sacrifices made by many of the employers, to retain as many workmen as possible in their manufactories.

On the other hand, as is justly stated in the report, we should, in order to form a just idea of the miserable condition of the labouring population of Paris during the four worst months of 1848, add to the 186,405 discharged workmen, a large proportion of the 32,583 persons who in 1847 were found to be working on their own account, either alone or with the help of a single workman, and who would find themselves without employment. The crisis would, for these, and also for the 25,116 persons employing each not more than ten workmen, prove even more distressing than for the workmen themselves, reducing many among them from a condition of independence to the necessity of themselves becoming workmen for wages.

It is a curious fact stated in the report, that the carriage builders, whose sales fell off in 1848, as compared with 1847, to the extent of 83, 86, and even 90 per cent., found some compensation in the increased demand which arose for military equipments, the amount of which was greater in 1848 than 1847 by 29 per cent. Among the persons engaged in several of the individual branches of industry comprised in the several groups, the suffering was much greater than would appear from the figures already given, while consequently others would escape with smaller injury. Of those comprehended in the "spinning and weaving group," the woolcombers experienced a loss of trade equal to 90 per cent., and pattern drawers, 80 per cent. The makers of sofas (fauteuils) and the like articles of luxury, suffered to the extent of 85 per cent. Wood-turners and makers of billiard-tables, suffered equally. Bronzists had a lessened demand, equal to 76 per cent.; and upholsterers found their sales diminished by 74 per cent. Goldbeaters suffered a diminution of 87 per cent., goldsmiths of 73 per cent., and jewellers 68 per cent. Printers and compositors suffered but little comparatively, their labour producing, in

1848, only 27 per cent. less than in 1847; for although the printing of larger works was, to a very great degree, suspended, there arose a good demand for their labour, in the printing of pamphlets and smaller works called for by the circumstances of the time. The effect of the crisis was further lessened by the degree in which the export trade was maintained, the value of goods thus sent through the Paris custom-house in 1848 having been smaller than that of the exports of 1847 by only 11½ per cent.; and considering the great and sudden fall in the prices of all articles of French manufacture after the revolution, it is fair to assume that the quantity of goods thus exported in the later year, was at least as great as it had been in 1847.

The report gives various statements regarding the degree of instruction found among the workmen, their method of living and habits, upon many of which subjects I must forbear to enter, lest this abstract should extend itself to an inconvenient length. One of the most interesting of these matters is that relating to instruction. The Committee succeeded in ascertaining certain facts on this head, respecting 169,431 workmen, out of the total number of 204,925 employed, or 83 per cent. of the whole. Among these there were found 147,311, or 87 per cent., who could read and write, and 22,120 who were uninstructed. They give it as their opinion, that if they had succeeded in obtaining information on this head, respecting the the whole male population of Paris engaged in manufactures, the proportional result would have proved the same as that which they have ascertained. With some very trifling exceptions, they found that all workmen engaged in printing and employments connected therewith, all those employed by jewellers and gold and silver smiths, and those engaged in the production of articles to which the name of "Parisian Industry" is applied, are instructed. The uninstructed are mostly found among those employed in labour connected with the preparation of leather, turnery, and basket-work. Out of 86,617 women whose condition in this respect was ascertained, 68,219, or 79 per cent., were found able to read and write.

It speaks well for the personal respectability of the labouring population of Paris, that among 167,094 males and 87,204 females, with regard to whom answers in this respect were obtained, there were

	Males.	Females.
Living in apartments furnished by themselves	122,922	68,691
,, with parents or relations	4,200	12,141
,, with their employers	5,661	2,214
,, in furnished lodgings	34,311	4,158
	167,094	87,204

On the subject of holiday-making, it is said:—The voluntary holiday of Monday has, among the greater part of the occupations in Paris, the saddest effect upon the morality of the workpeople, and it is this which most generally deprives them of the means of making any saving. If Sunday is not observed by them as a day given to religion, it is at least regarded by the workman as a day to be spent with his family. He willingly gives up part of this day to industry, but in

the evening he walks abroad with his wife and children. He considers, however, that he has a right to another day devoted to his personal gratification. Monday is the day to be spent with his comrades, and it is then that his expenditure is the most lavish. The Monday holiday is the object of the most lively desire, and to acquire the means for its indulgence is often the greatest stimulus to industry. In the course of the inquiries made by the Committee, it often appeared that the men who received the largest wages are those whose savings are the smallest. Not only do they absent themselves from the work-shop on Monday, but their absence is prolonged for two, three, or more days, until their resources for dissipation are exhausted; in which imprudent conduct they have but too many imitators in England and other countries.

APPENDIX.

Articles de Paris.

Makers of Accordions	Straw Hat Cleaners and Preparers	"Necessaire"-makers (Dressing or Travelling Case-makers)
Whalebone Cutters or Splitters	Workers in Hair	Organ Builders
Toy-makers (Bimbeloterie)	Fan-makers	Parasol and Umbrella-makers
Horn, Bone, and Mother-o'Pearl Button-makers	Wax Figure-makers	Perfumers
Metal and Stuff Button-makers	Artificial Flower-makers	Comb-makers
Makers of Fine Brushes	Sheath-makers	Piano and Harp-makers
Watch and Clock Dial-makers	Leather Glove-makers	Feather Sellers & Dressers
Cane and Whip-makers	Warm Glove-makers	Portfolio-makers, &c.
Makers of Paper Boxes	Clock-makers	"Tabletterie" (Makers of small wares, chiefly of wood, ivory, tortoise-shell, bone, and horn)
Straw Hat Finishers and Trimmers	Musical Instrument-makers— (String, Bow, and Wind) (Wood and Brass)	
	Spectacle Frame-makers	

Rates of Wages Earned by Assistants in the undermentioned Trades.

Trades.	Lowest.	Highest.	Average.	Average Weekly Earnings in English Money.
	Fr.	Fr.	Fr.	£ s. d.
Tailors	0·75	8·00	3·60	1 0 2
Butchers	1·00	7·00	3·50	0 19 7
Jewellers	1·00	15·00	5·67	1 11 9
Bakers	1·00	7·00	3·50	0 19 7
Shoe-makers	0·75	9·00	2·95	0 16 6
Carpenters and Joiners	2·50	8·00	4·89	1 7 4
Silversmiths	2·00	10·00	4·95	1 7 8
Lace-makers	....	....	1·90	0 10 7
Cabinet-makers	....	....	3·61	1 0 3
Masons	....	....	3·35	0 18 9
Locksmiths	....	....	3·83	1 1 5
Linen Garment-makers	2·25	5·50	3·36	0 18 10
Sugar Refiners	....	....	3·23	0 18 1

Rates of Wages Earned by Assistants in the undermentioned Trades—Continued.

	Lowest.	Highest.	Average.	Average Weekly Earnings in English Money.
	Fr.	Fr.	Fr.	£ s. d.
Curriers	1·58	10·00	4·22	1 3 7
Carpet-makers	....	....	4·32	1 4 2
Coach Builders	1·50	8·00	4·01	1 2 5
Confectioners	....	....	3·89	1 1 9
Bronzists	....	....	4·18	1 3 6
Hat-makers	1·50	12·00	4·25	1 3 10
House Painters	....	....	3·93	1 2 0
Sausage-makers, &c.	....	....	....	....
Printers	1·50	15·00	4·43	1 4 10
Glove-makers	2·00	6·00	4·10	1 2 10
Milliners	2·50	4·50	3·62	1 0 3
Laundresses	0·50	3·50	2·19	0 12 3
Piano and Harp-makers	1·25	20·00	4·83	1 7 0
Artificial Flower-makers	2·00	6·00	3·77	1 1 1
Paper Hanging-makers	....	....	....	....

The most important among the branches of industry included in the foregoing table, as respects the number of persons engaged as employers or workpeople and the value of articles produced, are the following:—

	Numbers employed.		Total.	Value of Articles.
	Masters.	Workmen.		
	No.	No.	No.	£
Tailors	6,891	22,215	29,106	3,225,972
Butchers	500	1,429	1,929	2,995,737
Jewellers	485	4,939	5,424	2,435,553
Bakers	604	2,646	3,250	2,409,696
Shoe-makers	6,048	20,929	26,977	1,731,299
Carpenters and Joiners	1,133	11,679	12,812	1,723,835
Silversmiths	126	4,445	4,571	1,161,044
Lace-makers	992	9,494	10,486	1,136,198
Cabinet-makers	1,831	9,046	10,877	1,119,318
Masons	364	9,287	9,651	1,074,149
Locksmiths	1,077	7,496	8,573	1,064,576
Linen Garment-makers, &c.	1,966	10,190	12,156	1,062,148
Sugar Refiners	9	435	444	940,000
Curriers	271	2,460	2,731	936,996
Carpet-makers	476	3,920	4,396	826,528
Coach Builders	194	3,772	3,966	775,893
Confectioners, &c.	440	2,355	2,795	740,692
Bronzists	188	2,711	2,899	739,760
Hat-makers	639	4,093	4,732	670,507
House Painters	866	5,571	6,437	645,380
Sausage-makers, &c.	118	833	951	629,252
Printers	84	4,536	4,620	610,888
Glove-makers	182	1,950	2,132	570,730
Milliners	852	2,717	3,569	493,044
Washerwomen	4,847	8,763	13,610	482,408
Piano and Harp-makers	194	2,889	3,083	459,443
Artificial Flower-makers	618	1,979	2,597	442,227
Paper Hanging-makers	139	3,295	3,434	409,086

Table shewing the Number of Persons, whether Employers or Employed, who were engaged in the various Branches of Industry prosecuted in the City of Paris, together with the Value, stated in English Money, of the various Articles produced by them in the Year 1847.

Description of Industry.	Value Produced.	Employers.				Employed.				
		Employing more than 10 Persons.	Employing 2 to 10 Persons.	Employing 1 or no Workmen.	Total.	Adult Males.	Adult Females.	Male Children.	Female Children.	Total Employed.
	£									
Preparation of Food	9,074,523	113	2,066	1,494	3,673	7,951	1,394	1,035	48	10,428
Building	5,816,507	873	2,300	888	4,061	40,083	135	1,367	18	41,603
Furnishing	5,485,810	856	2,605	2,252	5,713	28,745	3,845	3,484	110	36,184
Clothing (Garments for use)	9,637,892	1,739	8,547	18,930	29,216	30,274	54,398	674	4,718	90,064
Spinning and Weaving	4,232,739	698	1,244	1,857	3,799	11,028	21,874	2,627	1,156	36,685
Leather	1,670,519	102	233	91	426	4,241	234	98	....	4,573
Saddlery, Coach, and Harness-making	2,094,287	279	700	274	1,253	10,625	2,694	417	18	13,754
Chemicals and Earthenwares	2,981,864	212	460	587	1,259	6,572	2,727	392	46	9,737
Metals, Machinery, and Hardwares	4,145,264	545	1,469	1,090	3,104	22,081	1,269	1,510	34	24,894
Jewellery and Plate	5,393,211	432	1,081	879	2,392	10,835	3,739	1,883	362	16,819
Baskets and Turnery	819,292	85	785	691	1,561	4,021	632	716	36	5,405
Articles of Parisian Industry	5,146,351	833	2,510	2,781	6,124	17,583	15,540	1,485	1,071	35,679
Paper, Printing, and Engraving	2,046,875	350	1,116	769	2,235	10,886	4,410	1,175	234	16,705
Totals	58,545,134	7,117	25,116	32,583	64,816	204,925	112,891	16,863	7,851	342,530

General Table of Wages paid to Adult Persons employed in different Branches of Industry.

Description of Property.	Number of different Traders.	Males.						Females.					
		Earning less than 3 Francs, or 2*s.* 4⅘*d.* Daily.	Earning from 3 to 5 Francs, or from 2*s.* 4⅘*d.* to 4*s.* Daily.	Earning more than 5 Francs, or 4*s.* Daily.	Paid by the Week, Month, or Year.	Sons or Relatives of the Employers.	Total.	Earning less than 60 Centimes, or 5¾*d.* Daily.	Earning from 60 Centimes to 3 Francs, or from 5¾*d.* to 2*s.* 4⅘*d.* Daily.	Earning more than 2*s.* 4⅘*d.* Daily.	Paid by the Week, Month, or Year.	Wives, Daughters, or Relatives of the Employers.	Total.
Preparation of food	17	236	1,485	57	6,137	36	7,951	....	458	....	890	46	1,394
Building	21	5,434	33,307	1,161	126	55	40,083	....	106	....	8	21	135
Furnishing	32	2,126	24,945	1,490	101	83	28,745	....	3,514	39	33	259	3,845
Clothing (Garments for use)	21	8,384	20,228	540	916	206	30,274	361	46,371	195	2,712	4,759	54,398
Spinning and Weaving	36	2,538	7,579	520	339	52	11,028	446	20,456	112	148	712	21,874
Leather	7	304	3,575	332	29	1	4,241	1	228	....	....	5	234
Coach, Saddlery, and Harness-making	14	1,339	8,709	473	78	26	10,625	77	2,545	2	6	64	2,694
Chemicals and Earthenwares	33	1,015	5,083	246	215	13	6,572	....	2,632	2	6	87	2,727
Metals, Machinery, & Hardwares	33	2,269	18,181	1,497	74	60	22,081	4	1,139	31	....	95	1,269
Plate and Jewellery	35	752	8,769	1,204	76	34	10,835	1	3,469	81	14	174	3,739
Baskets and Turnery	15	566	3,170	13	231	41	4,021	4	521	....	10	97	632
Articles of Parisian Industry	34	1,716	13,672	1,449	646	100	17,583	54	14,448	139	295	604	15,540
Paper, Printing, and Engraving	27	774	8,513	1,411	155	33	10,886	2	4,163	25	35	185	4,410
Totals	325	27,453	157,216	10,393	9,123	740	204,925	950	100,050	626	4,157	7,108	112,891

Tabular View of the Industry of the several Arrondissements.

Arrondissement.	Number of Employers.	Number of Workmen.	Total Number.	Value of Goods Produced.	Value Produced per Head.
				£	£ s.
1st	3,933	21,023	24,956	4,111,700	164 15
2nd	6,459	33,998	40,457	7,106,748	175 13
3rd	4,075	28,256	32,331	5,085,024	157 5
4th	4,181	16,861	21,042	2,894,016	137 10
5th	6,078	45,638	51,716	6,791,099	131 6
6th	10,324	57,988	68,312	9,407,145	137 14
7th	5,971	35,605	41,576	6,155,959	148 1
8th	7,456	43,543	50,999	7,006,559	137 7
9th	3,153	10,273	13,426	1,596,152	118 18
10th	4,134	15,962	20,096	2,828,872	140 15
11th	3,952	15,901	19,853	2,549,435	128 8
12th	5,100	17,482	22,582	3,012,425	133 8
	64,816	342,530	407,346	58,545,134	143 14

On the Laws of the Currency in Ireland, as exemplified in the changes that have taken place in the Amount of Bank Notes in Circulation in Ireland, since the passing of the Act of 1845.

By J. W. Gilbart, Esq., F.R.S.

[Read before the Statistical Section of the British Association, at Belfast, 2nd and 3rd September, 1852.]

No. I.

I cannot better explain what I mean by the Laws of the Currency in Ireland, than by making two extracts from an article on the Laws of the Currency, published in the "Foreign and Colonial Review," of April, 1844. This article was written by myself, and contains a summary of my own evidence on the subject before the Committee on Banks of Issue, in the year 1841 :—*

"We will take the monthly returns of the circulation for the period that is past; that is, from September, 1833, to the end of 1843, and endeavour, by observing their various revolutions, to discover if they are governed by any fixed causes or principles—to ascertain if those principles are uniform in their operation; and if we should discover that the revolutions of the currency are regulated by any uniform principles, we shall call those principles the Laws of the Currency.

"From what we have already said of the laws of the currency, those of our readers who are acquainted with Ireland will be able to judge beforehand of the revolutions of her circulation. Being purely an agricultural country, the lowest points will of course be in August or September, immediately before the harvest and the commencement of the cattle and bacon-trade. Then it rises rapidly till it reaches its highest point in January, and then gradually declines. As an agri-

* A summary of the evidence taken before the Committee has been published by Mr. G. M. Bell.—Longman.

cultural country, we should naturally expect that during the season of increase the circulation would expand most in the rural districts; and so we find that the circulation of the Bank of Ireland, in Dublin, expands very moderately—that of her branches which are located chiefly in large towns expands more—while the circulation of the joint-stock banks which are located in the agricultural districts receives the largest increase. Again, the purchases and sales of agricultural produce are known to be in small amounts; and hence the notes of the smallest denomination receive the largest relative increase. The annual changes of the Irish circulation are governed chiefly by the produce of the harvest and the prices of agricultural products. These are the laws of the circulation of Ireland."

In the present paper I shall consider the laws of the circulation only so far as they are exemplified in the changes that have taken place in the annual amounts of the notes in circulation in Ireland since the year 1845.

In that year an act was passed for the regulation of bank notes in Ireland. The average amount of notes that had been in circulation during the year ending May 1, 1845 (6,354,494*l.*), was made the fixed or authorised issue. For any amount beyond its authorised issue, each bank was required to hold an equal sum in gold or silver coin, the silver not to exceed one-fourth of the whole. The act came into operation on the 6th December, 1845, and from that period each bank has made returns to the Government, stating the average amount of notes in circulation during the preceding four weeks, distinguishing the notes under 5*l.* from those of 5*l.* and upwards, and giving the amount of gold and silver coin it held in its vaults. These returns are made by all the banks of circulation in Ireland. These are, the Bank of Ireland, the Provincial Bank of Ireland, the National Bank of Ireland, the National Bank of Clonmel, the National Bank of Carrick-on-Suir, and the three banks in Belfast, viz., the Northern Bank, the Belfast Banking Company, and the Ulster Banking Company.

We possess these returns for every four weeks from January, 1846, to the present time. By adding together all the returns made during each year, and then dividing by thirteen, we obtain of course the average amounts in circulation from 1846 to the year 1851, inclusive. I have also added the proportion per cent. which these averages bear to the certified circulation of 6,354,494*l.*

The following are the average amounts in circulation:—

Years.	Average Circulation.	Proportion to Certified Circulation.
1846.....	7,259,948	114·25
1847.....	6,008,833	94·55
1848.....	4,828,992	76·00
1849.....	4,310,283	67·83
1850.....	4,512,444	71·00
1851.....	4,462,909	70·25

From this table it appears that, if the authorised issue be represented by the number 100, the actual circulation for the six years, 1846 to 1851, inclusive, will be represented by the numbers, 114, 94, 76, 67, 71, 70.

The question naturally occurs to us—What is the cause of this great falling-off in the annual circulation since the passing of the act of 1845?

We may premise that this reduction could not be produced by the operation of the act itself. The act does not restrict the amount of notes in circulation; it merely requires, that for all notes issued above a fixed amount, the banks shall hold in their vaults an equal amount of gold. Nor has this reduction been the voluntary act of the bankers. Their profits would have been greater if the circulation had been greater, but they had not the power to keep it up to the authorised amount; and, fortunately for them, the act did not require them to do so. Nor does the amount of notes in circulation correspond with the amount of gold in the Bank of England; for the gold in the Bank of England is, at the present time, much higher than it was on the 1st May 1845, although the Irish notes in circulation are much less. We have here, then, three negative laws of the currency in Ireland—namely, that the amount of notes in circulation in Ireland is not regulated by the Act of Parliament, nor by the wishes of the Irish bankers, nor by the stock of gold in the Bank of England.

As notes are issued in Ireland chiefly for the purpose of purchasing agricultural produce, it would seem to follow that the amount of notes put into circulation, will be regulated mainly by the quantity of that produce, and by the price at which it is purchased. If, then, we find that, in the years since 1845, the quantity of agricultural produce has been less, or the price at which it has been sold has been less, and especially if both these circumstances should have occurred, then have we an adequate cause for a reduction in the amount of bank notes in circulation.

1. The annual productiveness of the harvest would affect the amount of notes in circulation.

We have already noticed the annual averages of the circulation, taking the year according to the calendar, from January to December. We will now take the annual averages, commencing each year from the end of August, which is more properly the agricultural year. By this arrangement we shall be better able to compare the character of the harvest in each year with the amount of notes in circulation. The following are the annual averages, ending with the month of August, and the proportion to the certified circulation:—

Years.	Average Circulation.	Proportion to Certified Circulation.
1846.....	7,192,133	113·18
1847.....	6,644,994	104·57
1848.....	5,023,442	79·00
1849.....	4,433,732	69·77
1850.....	4,396,820	69·19
1851	4,537,304	71·41
1852.....	4,528,762	71·26

From the description of the harvests given in the annual reports of the Provincial Bank of Ireland, we learn that the years 1846 and 1848 were disastrous in regard to the produce of the harvest; and we

consequently find, as we should naturally expect, a falling-off in the following years in the circulation of bank notes; but the harvest of 1847 is described as "on the whole a productive one," that of 1849 is "on the whole above an average." In 1850, though the crop of wheat was inferior, "the oat and barley crops were good both in quality and quantity." Yet these productive years did not produce any corresponding advance in the circulation of bank notes. We infer, therefore, that there are other laws or circumstances by which the circulation is governed besides the productiveness of the harvest on the land actually under cultivation.

2. This will lead us to observe, that a bad harvest in one year may, by the distress it produces, cause a less production of commodities in several following years; and hence there may be a less demand for bank notes.

A bad harvest produces distress among the farmers; and this distress affects the amount of circulation in two ways:—First, the farmer consumes his own produce instead of selling it, and thus does not require the use of notes. If his potatoes are destroyed, he will consume his grain. In the Provincial Bank Report of 1846, it is stated that, although the crop of oats was productive and good, a larger portion than usual of the year's crop was believed to be retained for consumption in Ireland, in consequence of the apprehended deficiency in the supply of potatoes. Secondly, the distress of the farmer diminishes the instruments of reproduction. If he has no potatoes he can rear no pigs. An abundant crop of potatoes produces in the following year an abundant crop of pigs, but a famine of potatoes will be followed by a famine of pigs; and hence, the distress of one year may have the effect upon the circulation of notes in several succeeding years. This circumstance is referred to in the Provincial Bank Report of 1850—"The extensive cultivation of the potato may be considered liable to objection, but it must be remembered that this is the foundation of one branch of the provision trade, which was in former years of great importance to Ireland; and as the stock of pigs, which was so greatly reduced after the failure of the potato crop of 1846, has been again considerably increased during the last two years, it may be hoped that, if there be a good potato crop this year, that important branch of Irish trade may be again established on its former basis."

After the failure of the potato crop in 1846, the exportation of swine was reduced from 480,827 in 1846, to 106,407 in 1847. The potato crop again failed in 1848. The number of swine exported in 1848 was 110,787; in 1849 it was only 68,053.

The destruction of the pigs which took place in 1846 would doubtless affect the circulation of notes in subsequent years, especially in 1847, 1848, and 1849, and probably, also, to a certain extent, in the years 1850 and 1851.

But pigs can be reproduced more rapidly than cattle, as they are more fruitful, and sooner reach maturity. The seasons of famine caused the exportation of cattle in order to obtain food; and thus the means of reproduction in future years were destroyed to a more serious extent. In passing through Connemara a few days ago, a fellow traveller informed me that the mountains we then saw naked had, previous to the famine, been covered with sheep and cattle.

The extent of the distress, and consequent destruction of the instruments of reproduction, was shown in the rapid increase of the poor-rates; and it may be remarked, that the greatest number of persons relieved was in the year 1849—the year that the notes in circulation were at their lowest point of depression.

3. We may also observe, that a reduction in the quantity of commodities produced may be caused by a reduction in the number of producers, and this would occasion a less demand for bank notes.

It appears from the census of 1841 and 1851, that, between these two periods, the population has declined 1,659,330, or at the rate of 20 per cent.; and calculations have been made to show that the whole of this decrease had taken place since the year of the famine, 1846.* Such a decrease, from whatever cause, must be attended with a decrease in the commodities produced and consumed by those individuals, and will consequently have occasioned a less demand for bank notes to pay for those commodities. If the lands previously occupied by this departed population remain uncultivated, there is a direct decrease in the agricultural produce. Such might be the effect where the occupants died. Emigration might produce an additional effect. The emigrants, before their departure, would change all their bank notes into gold to take with them, and thus would occasion a further reduction of the circulation.

It may be presumed, therefore, that, up to the present time, there has been a large decrease in the produce of the country, and consequently in the circulation of bank notes, from the decrease in the number of its inhabitants. This decrease would probably take place chiefly by deaths in the years 1846 and 1847, and in subsequent years chiefly by emigration. A great stimulus was given to emigration in the year 1845, which has continued to the present time. We may observe, that the year of the greatest emigration, 1849, was the year of the greatest distress, and of the greatest diminution of bank notes in circulation.

This decrease of the population occurred chiefly among those who had but small holdings in land. Their removal, therefore, would effect the circulation in two ways, even supposing the land were subsequently cultivated. Those small cultivators are compelled to bring their produce to market immediately after the harvest, and hence the circulation rises in September and October. From these small holdings, too, the produce is brought to market in small quantities—"each man brings his sack of oats, or two or three pigs, to market;" and hence the circulation, thus occasioned, must consist chiefly of small notes.

4. We may further observe, then, the amount of notes that circulate in a country will also be affected by the quantity of commodities exported, and the quatity imported.

The season in which there is the greatest export of commodities is the season of the highest circulation. But importation withdraws the notes previously in circulation. Were a banker to advance 100*l.* to an exporter, the advance would be made in notes, which would be distributed among the farmers, and remain in circulation till the landlord called for his rent. Were a banker to advance 100*l.* to an

* See Table I. in the Appendix.

importer, the advance must be made by a draft on England, and he would be repaid by his own notes, withdrawn from circulation in payment for the articles imported. Imports not only do not draw out any of the bankers' notes, but they, moreover, withdraw those which were previously in circulation. When a man imports, say 100*l.* worth of oats, he sell them to the dealers, and the dealers to the consumers. The consumers pay the dealer in notes, which are passed to the importer, who takes them to the bank, and gets for them a bill on London, with which he pays for the oats. The effect of diminished exports and increased imports is referred to in the Reports of the Provincial Bank of Ireland, every year from 1847 to 1851; and Mr. Murray states, in his evidence before the Committee on Commercial Distress, that not only was the amount of notes reduced, but also that of silver.

"When a period of pressure takes place, the silver is forced out of their hands into the hands of the banks, and the account I have delivered to the Committee exhibits that. On the 3rd of January, 1846, there was in the hands of all the banks in Ireland 267,000*l.* in silver; there is at this present moment 501,000 in silver in the hands of all the banks; so that you have to add to the diminished issue of bank notes a dimished amount of silver, in the hands of the general community of Ireland, of nearly 250,000*l.*"

The public returns show that, after the year 1845, the exports from Ireland were largely reduced, especially in the years 1847 and 1849, and in those years, too, occurred the largest importations. These imports were paid for by the capital of the country, and in part by the money of the country.

5. Thus we find that the reduction in the amount of notes in circulation in Ireland has been preceded or accompanied by a reduction in the amount of commodities produced, occasioned by a reduced productiveness in the land actually cultivated, a destruction in the instruments of reproduction by the distress thus occasioned, a reduction in the number of producers by deaths and emigration, and the exportation of an increased portion of its capital in exchange for food. But there is another circumstance that concurs powerfully in producing the same effect—that is, the prices at which the commodities brought to market are sold.

The failure of the crops in Ireland led the late Sir Robert Peel to introduce "An Act to Amend the Laws relating to the Importation of Corn." It is 9 & 10 Vict., cap. 22, and was passed June 26, 1846. A large reduction was made in the duty immediately; and it was enacted that, after the first day of February, 1849, the duty on wheat, barley, oats, &c., should be only 1*s.* per quarter. And, in consequence of the increased distress in Ireland, another act was passed, in January 1847 (9 Vict., cap. 1), to suspend, until the first day of the following September, all the duties on the importation of corn.

In consequence of these acts, large importations took place, and the prices gradually declined.

I have no means of ascertaining the average prices of grain throughout Ireland, but I have obtained from a London corn-merchant the average prices of wheat, barley, and oats, for each year from 1841 to 1851, and taking in each case the prices of the year 1845 as repre-

sented by 100, I have calculated the variations per cent. in the subsequent years.

In the following table the first column represents the variations in the circulation for each year, ending December, as compared with the actual circulation ending December 1845 (6,949,403*l.*) The table assumes, of course, that the changes in the prices of grain in Ireland have corresponded with those that have taken place in England:—

A Comparative View of the Changes in the Prices of Wheat, Barley, and Oats, and the Circulation for each Year, ending December, from 1845 *to* 1851, *as compared with the Circulation and the Prices of the Year* 1845.

Years.	Circulation.	Wheat.	Barley.	Oats.
1845.....	100·00	100·00	100·00	100·00
1846.....	104·46	107·90	103·40	105·20
1847.....	86·47	136·80	138·70	127·00
1848.....	69·49	99·51	99·47	91·11
1849.....	62·02	87·68	87·63	77·78
1850.....	64·93	79·47	73·95	72·96
1851.....	64·22	76·03	78·15	82·60

On comparing the years 1845 and 1851, we find that the circulation has declined 35·78 per cent., the price of wheat has declined 24 per cent., of barley 21·85 per cent., and of oats 17·40 per cent. If we compare the year 1841 with 1851, the decline of the circulation will only be at a rate of 16·7 per cent., while the price of wheat shows a decline of 40 per cent., of barley 25 per cent., and of oats 17 per cent.

6. Having now taken a view of the circumstances that have regulated the circulation of bank notes in Ireland, we will endeavour to trace the influence they have had respectively upon the circulation of each year from 1845 to 1851. We shall compare each year, not with the certified circulation, ending May 1, 1845 (6,354,494*l.*), but with the actual circulation, ending December 1845 (6,949,403*l.*) We may premise that this standard of measurement is a high standard. The circulation of the four preceding years had been as follows:—

	£		£
1841.....	5,355,814	1843.....	5,168,585
1842.....	5,114,457	1844.....	5,936,913

The following is the circulation of the succeeding years:—

Years.	Circulation.	Increase on the Preceding Year.	Decrease on the Preceding Year.
1845.....	6,949,403	.....	.....
1846.....	7,259,948	310,545	.....
1847.....	6,008,833	.....	1,251,065
1848.....	4,828,992	.....	1,179,891
1849.....	4,310,283	.....	518,709
1850.....	4,512,444	202,161	.....
1851.....	4,462,909	.....	49,535

1846.—The increase in the circulation this year was owing, doubtless, to the abundant harvest of 1845. It has been observed that good and bad harvests often come in clusters. According to the Reports of the Provincial Bank of Ireland, the four years, ending with 1841, were all remarkable for bad harvests. But in the four succeeding years, from 1842 to 1845, the harvests were abundant; and in each case an increase had taken place in the circulation of notes in the following year, though not to any great amount in the year 1843, owing, possibly, to a fall in the price of wheat and oats.

The failure of the potato crop in 1846 does not appear to have had much effect in diminishing the amount of notes in circulation in that year. But we must recollect that the circulation was sustained by the large expenditure made by Government to relieve the distress.

1847.—The decline of 1,251,065*l.* in this year was, doubtless, owing to the failure of the potatoes in the preceding year. This seems obvious, from the large falling-off in the exportation of swine. It was further diminished by the large importations of food and the increase of emigration. The circulation would probably have fallen still lower, had not an advance taken place in the price of all kinds of grain.

1848.—Another large decrease, of 1,179,891*l.* in the circulation, as compared with the amount of the preceding year. In addition to the causes that continued to operate from the preceding year, this year was remarkable for a bad harvest, and another failure in the potato crop. The poor-rates were more than doubled. Still, the circulation would not have fallen so low, had not a large reduction taken place in the prices of all kinds of agricultural produce.

1849.—A further decline in the circulation (518,709*l.*) The lowest amount of notes in circulation, since the passing of the act of 1845, occurred in the four weeks ending September 8, in this year; it was 3,811,445*l.* The failure of the potato crop in the preceding year was shown this year in a further reduction in the export of swine. In this year, too, occurred a further reduction in the price of grain, a larger increase in the importation of food, a great increase in the number of persons relieved from the poor-rate, and a great stimulus appears to have been given to emigration.

1850.—Although the prices of grain continued to decline, the circulation of notes this year shows an increase of 202,161*l.* upon that of the preceding. The export of swine was increased. The importation of food, though large, was less than in the preceding year, and a large reduction took place in the poor-rates.

1851.—The circulation differs little from that of 1850, only by 49,535*l.*; and the year is marked by similar characteristics, with a still further decline in the poor-rates. The price of wheat was lower than the preceding, but that of oats had advanced.

1852.—With regard to the present year, so far as it has gone, it seems to resemble the last in regard to the total amount of the circulation. Taking the year ending August, the average amount of the circulation in 1852 is nearly the same as that of 1851. But there is a difference in the circulation of the different months. The circulation of 1851 was higher than that of 1852 in the months of January, February, March, and April, but less than 1852 in the months of

May, June, July, and August. This is a favourable indication, and shows that at present the country is in a better state than it was this time last year. During the four weeks ending the 9th August, 1851, the circulation was 3,978,435*l.*; for the same period ending 7th August, 1852, it is 4,396,455*l.*

From the whole, we infer that the difference between the amount of bank notes circulating in a country at two distant periods cannot be regarded as any correct test of the condition of its inhabitants at those periods, unless we take into account all the circumstances by which that difference is attended—that the decline of the circulation of bank notes in Ireland, from the year 1845 to 1851, is no accurate measure of the distress that has existed in the country, or that now exists, as other causes besides distress have concurred in producing that effect—that in comparing the circulation of 1845 and 1851, we are making a comparison unfavourable to the country, as the year 1845 was a year remarkable for the high amount of its circulation—and that we should indulge in no gloomy inferences as to the condition of the country, even if the circulation should never recover its former amount.

I may, indeed, remark, that even the permanent reduction of the circulation to its present amount would be no conclusive evidence of the distressed condition of the country; for though distress first caused the decline of the circulation, yet, from the new circumstances which that distress introduced, the same amount of bank notes are not now necessary for conducting its operations. In confirmation of this opinion, I will quote from the article on the "Laws of the Currency" an extract on the circulation of England:—

"During the last five years there has been a gradual reduction in the annual amount of the country circulation, as appears from the following table, which shows the average amount in each year, from 1839 to 1843, both inclusive.

	£		£
1839.....	11,715,527	1842.....	8,249,052
1840.....	10,457,057	1843.....	7,667,916.
1841.....	9,671,643		

Thus it appears that, since the year 1839, the circulation of the Private and Joint Stock Banks of England has declined to a greater extent than the circulation of Ireland since the year 1841. At present, the authorised circulation of the English banks is only 8,108,062*l.*, and the actual circulation, for the month ending on 12th of June last, was only 6,355,397*l.*,* and it has been at a much lower amount. Among the causes assigned for this decline in the circulation of the English banks, are the establishment of the penny postage, the introduction of railways, the decline in the price of corn, and the extension of the practice of keeping banking accounts. These causes have also operated in Ireland, while there are other causes, such as the consolidation of small farms, and the cultivation of flax instead of corn, that will tend to produce the same effects. Even increasing prosperity will not always increase the amount of notes in

* The official Returns for the circulation of bank notes in England, Scotland, and Ireland, are regularly published every month in the "Bankers' Magazine."

circulation,—sometimes the reverse. For as nations become wealthy, they learn to economise the currency. Large transactions are settled by cheques on bankers, or bills of exchange, and notes are employed only in making payments of small amount. I cannot here enlarge on these topics. I can only recommend the study of the variations in the circulation of bank notes in Ireland, since the year 1845, as a subject fruitful in illustrations of most important principles, and suggestive of many practical lessons. Here men of business may obtain guidance, men of science may gather wisdom, and statesmen may receive instruction.

A Table compiled chiefly from "Thom's Statistics of Ireland."

Years.	Average Circulation of the Year ending December.	Swine Exported from Ireland to Great Britain.	Grain of all kinds Exported from Ireland to England.	Imports into Ireland.	Expenditure from the Poor-Rates.	Number of Persons Relieved from the Poor-Rates.	Number of Emigrants from the United Kingdom.	Number of Emigrants from Irish Ports.	Total Miles of Railway opened on the 1st of January.
	£		Qrs.	£	£				
1845...	6,949,403	...	3,251,901	2,247,098*	316,025	114,205	93,501	23,705	65
1846...	7,259,948	480,827	1,875,393	2,247,098*	455,001	243,933	129,851	38,813	65
1847...	6,008,833	106,407	960,532	8,034,895	803,686	417,139	258,270	95,952	120
1848...	4,828,992	110,787	2,082,841	4,293,978	1,835,634	610,463	248,089	59,701	209
1849...	4,310,283	68,053	1,325,929	6,031,569	2,177,651	932,284	299,498	70,247	361
1850...	4,512,444	109,170	1,298,421	5,208,349	1,430,108	805,702	280,849	51,083	475
1851...	4,462,909	...	...	...	1,110,802	708,450	...	...	537

* Average of the three years 1844, 1845, and 1846.

No. II.

[This Paper, is a continuation of the Paper No. I. The Article was divided into two parts, and read before the Association on different days, merely because it was deemed too long for one reading.]

In my former paper I considered the changes that have taken place in the annual amount of notes that have circulated in Ireland since the passing of the act of 1845. In the present paper I shall consider the monthly variations in the circulation; its division into notes of *5l.* and upwards, and notes under *5l.*; its distribution among the different banks, and the amount of gold and silver they respectively hold to meet any demand that may be made upon them for the payment of their notes.

1. The monthly changes in the amount of the circulation.

Let us take up the returns, and look at any year we please, and we shall find that all the months vary from each other. Beginning at January, the amount of the circulation usually declines—slowly at first, but more rapidly in May, June, and July, until, by the end of August, we arrive at the lowest point. Then, in September, it begins to ascend, and goes on increasing till January, and then again declines till August.* Now, let us enquire what are the laws which regulate these monthly variations.

* See Table II. in the Appendix.

I stated that the annual variations were caused by variations in the quantity and price of agricultural produce. But, as no notes could be put into circulation until this produce is brought to market, the monthly circulation must depend upon the quantity of produce brought to market within the month. Now, it has been the custom in Ireland to commence bringing the produce to market immediately after the harvest. Hence arises the increase of the notes in September, and their further increase in the following months. But, in the beginning of the year the landlords collect their rents, and receive from their tenants the notes for which this produce has been sold; this brings the notes back to the bank, either to be placed to his credit (if he have an account there), or otherwise, in exchange for a letter of credit on Dublin or a bill on London. The circuit of a note, then, is this :—It is obtained from the bank by a corn-merchant, who pays it to a farmer for his corn, which he ships to England. The farmer afterwards pays the note for rent to his landlord, who brings it back to the bank. Every month the bank is issuing and retiring* notes, but from August to January it issues more than it retires; hence the amount of notes in circulation increases; but from January to August, it retires more notes than it issues, and hence the circulation falls.

The following important evidence, given by Mr. Murray before the Committee on Banks of Issue, in the year 1841, shows in what way the monthly variations in the circulation of notes may indicate the degree of agricultural distress :—

"The condition of the people is vastly improved within the last fifteen years; and, with the permission of the Committee, I will state a substantial instance of that improvement. In 1825, the crop of Ireland, especially that of the south and west, came to market with extreme rapidity after it was cut, and in very bad condition, being altogether thrashed out in the open fields. Stackyards were not to be seen, or rarely so. The markets were filled to overflowing during the months of October, November, and December. In January and February these markets were comparatively thinly attended by the farmers, as the crop was nearly out of their hands. After February, a cargo of wheat or oats could not usually have been collected out of the ordinary markets. The case is now very different. The markets are much less crowded with produce in October, November, and December, and continue equally well supplied in January and February. In March and April, field-labour occupies the farmers, but in May, June, and July, the markets now continue to be well filled where none appeared before, and the corn brought to them in good order; thereby showing that the people are now in a condition to hold over property which they were formerly, from necessity, compelled prematurely to dispose of."

In the evidence given by myself before the Committee on Banks of Issue in 1841, it was stated that the highest point of the circulation was about January, but since the year 1845, the highest point has usually been in November; thus confirming the statement of

* The word *retire* is the word usually employed by Scotch and Irish bankers to denote notes *withdrawn* from circulation, either by being lodged on deposit, or paid across the counter, or by some other operation.

Mr. Murray, that in seasons of distress the crops are brought earlier to market.

In the Parliamentary Committees of 1826, the monthly fluctuations in the circulation were advanced as an argument against the abolition of small notes, as in that case the banks would have to import gold from England every September, and return it in the spring, the expense of which they would have to reimburse to themselves by additional charges to the public.

2. Having glanced at the annual and the monthly changes in the circulation, I shall notice another feature suggested to us by these public Returns. We observe that a portion of the circulation consists of notes of 5*l.* and upwards, and another portion of notes under 5*l.*; and it may be useful to inquire if these two classes of notes are subject to the same laws, and whether they rise and fall at the same time, and in exact proportion to each other.

Viewing the monthly circulation, we observe that the small notes, like the large notes, are at their lowest amount about the month of August, and at their highest amount about January. But we observe, also, that, from August, the small notes increase more rapidly than the large ones, and after January they decline more rapidly; so that in every year the proportion of small notes in circulation is greater in January than in August.

In a table that I have compiled for the purpose, it is shown that the small notes bear a higher proportion to the large notes in the month of January than in the month of August.* Thus, in January 1846, the small notes were 58·94 per cent. of the circulation, but, in August, they were only 54·33 per cent. We may also observe, that those years that have the largest circulation have also the largest proportion of small notes. Thus, in 1846, the respective proportions for January and August are 58·94 and 54·33; but, in the year 1849, the proportions were only, for January, 50·72, and for August, 44·95 per cent. This is an indication that the reduction of circulation had taken place chiefly in the small notes; and this again shows that the distress had fallen chiefly on the smaller cultivators of the soil.

3. Having considered the annual and the monthly fluctuations in the currency, and the relative proportion of small and large notes in circulation, I will now proceed to another topic of inquiry.

It might be useful to know whether the total circulation stated in the Returns before us was distributed equally over the whole surface of Ireland, or distributed unequally, and what are the laws that might produce this unequal distribution.

The Returns before us would seem to afford us but little information on this subject. For, although we have the total circulation of every bank, we have not the separate circulation of each branch, and several of the banks have often branches in the same town.

Still, we may possibly glean some information on the subject, in regard, at least, to one of the four provinces into which Ireland is divided—the province of Ulster.

Viewing the three national banks as one, we have before us the separate circulation of six banks. Three of these banks have their chief office in Dublin—the Bank of Ireland, the Provincial Bank,

* See Table III. in the Appendix.

and the National Bank; and the other three have their chief office in Belfast—the Northern Banking Company, the Belfast Banking Company, and the Ulster Bank. Now, we may compare these two classes of banks with each other, in regard to their circulation, and we may inquire whether those banks whose circulation is confined to the province of Ulster, have any peculiar features distinct from the other banks; and if so, what is the cause of such peculiarities.

The total number of banks and branches issuing their own notes in Ireland is 163, of which 70 are in the province of Ulster. As the total population of Ireland is 6,515,794, and that of Ulster, 2,004,289,* the number of banks in Ulster, in proportion to its population, would be fifty.

The following table shows the number of Banks of Issue in the four provinces of Ireland respectively :—

Name of Bank.	Ulster.	Leinster.	Munster.	Connaught.	Total.
Bank of Ireland.....	4	10	6	4	24
Provincial Bank.....	15	7	13	3	38
National Banks	1	13	25	9	48
Belfast Banks	50	3	....	....	53
Totals....	70	33	44	16	163

It may be observed that the circulation of the Belfast banks include a much larger proportion of small notes than is contained in the circulation of the other banks. To show this, it will be sufficient to analyse the last Monthly Return.† Upon the total circulation of all the banks, the proportion of small notes is 49·39 per cent.; upon that of the Bank of Ireland, 34·73 per cent.; of the Provincial Bank, 58·82 per cent.; of the National Banks, 59·93 per cent.; and of the Belfast Banks, 86·55 per cent.

We may inquire—What is the reason that the banks of Ulster should have so large a proportionate circulation of small notes? In the evidence given, in the year 1826, before the Parliamentary Committees appointed to consider the propriety of abolishing small notes in Ireland, witnesses from Ulster had stated that small notes were necessary for the purposes of the linen manufacture. Mr. J. A. Smith, a linen-merchant, and agent for the Belfast Bank at Londonderry, stated to the Committee :—

"In Lancashire, I believe, all the raw materials are bought in large quantities, and by bills. In Ireland, the raw material is all bought in small parcels, and all in small notes. In Lancashire, there is only cash wanted to pay the workmen, but we want it both to pay the workmen and to buy the raw material. I am in the habit of employing my linen-buyers to go to the country markets, and I must supply them with a week's money before they start, perhaps five hundred or a thousand pounds. They have to go through the interior

* Table I. in the Appendix. † Table V. in the Appendix.

of the country, and do not return for a week. They make all the purchases in small quantities, and it is more convenient for them to carry notes than gold."

But, since that period, the operations of the linen trade have undergone a considerable change; and, as now conducted, they have not, I believe, much influence on the note circulation. On this subject I may quote a letter I have received in reply to my inquiries. It is well known to the inhabitants of Ulster that formerly notes were in circulation for twenty-five, thirty, and thirty-one shillings; these were abolished by the Act of 1845:

"A very considerable change has taken place in the linen trade since 1826. At that time, and for some years subsequent, it was the practice for the merchants to make all their purchases from the weavers direct, in the open market. The weaver bought his own yarn, wove it, and brought it in the web to be sold as soon as it was woven. Now it is quite different. There is a sort of middleman, whom we term a manufacturer. He supplies the yarn to the weaver, pays him for the weaving, and sells to the merchant. The smaller class of manufacturers, who may have from two to ten webs, sell in the open market still; but the merchant, instead of having as many persons to pay as there were webs to pay for, has comparatively few. The larger class of manufacturers, some of whom will have upwards of a thousand looms at work, bring in large quantities of cloth, which they dispose of in their warehouses. The quantity sold in Armagh market weekly in these ways is not under 10,000 pieces, which is probably treble the quantity brought in twenty years ago. The average value of the above quantity may be about 7,000*l.* As far as the linen trade is concerned, the circulation of bank notes must be greatly diminished. I should have mentioned that the average value of the cloth manufactured in the North of Ireland is much less by the piece than it was; first, from the cheapness of the yarn, and, secondly, from the quality of the cloth generally being of a coarser kind. In former days, the value of the webs sold in this market was from 25*s.* to 35*s.*, now it is under a pound. The fractional notes, for the purposes of the linen trade, are, therefore, not missed; and as the payments, except for the wages of weaving, are generally for considerable amounts, and every man in trade now-a-days having his banker, every transaction is settled by a cheque. The wages of the weaver are paid exclusively with silver, and a much larger qnantity of it is now required. All this must of course lessen the circulation of small notes, and, indeed, of the paper currency generally, and we have never had a gold currency. There is also a great change in the yarn trade. Formerly a large portion of the yarn used was hand-spun, now it is almost exclusively mill-spun.

"The flax trade is more entensive than ever it was; and so far as it and the pork trade are concerned, a small-note currency is as much required as formerly; and in these trades, probably, the fractional notes are missed; but there are no complaints, now that the traders have become used to the want of them."

During the season of depression, the circulation of the Belfast banks (viewing the three banks as one) was depressed lower than that of either of the other banks. Thus the certified circulation of all the

Belfast banks, as compared with the certified circulation of all the banks, is in the proportion of 13·15 per cent. But the actual circulation of the Belfast banks, in the year 1847, was only 11·93 per cent. of the total actual circulation. In 1848 it was only 11·82 per cent., and in 1849 it was 12·89 per cent. Afterwards it recovered. In 1850 it was 13·44 per cent., in 1851 it was 14·92 per cent., and in 1852, 16·61 per cent., being greater than its proportion of the certified calculation. It is known that the manufactures of Ulster are rapidly increasing; but, as I have already observed, manufacturing and commercial transactions of large individual amount do not put into circulation a proportionate amount of bank notes, such transactions being usually settled by cheques or by bills of exchange. At the same time, it will be observed that, during the last three years, the circulation of the Belfast banks has considerably increased.

Table showing the Proportional Circulation of each Bank, as compared with the whole Circulation of all the Banks, for the following Years, ending August:—

	Bank of Ireland.	Provincial Bank.	National Banks.	Belfast Banks.	Total.
Authorised circulation, year ending May, 1845	58·84	14·60	13·41	13·15	100
Actual circulation for the year ending Aug. 1847....	58·14	15·63	14·30	11·93	100
Actual circulation for the year ending Aug. 1848....	59·87	15·48	12·83	11·82	100
Actual circulation for the year ending Aug. 1849....	59·37	14·83	12·91	12·89	100
Actual circulation for the year ending Aug. 1850....	58·49	14·36	13·71	13·44	100
Actual circulation for the year ending Aug. 1851....	56·32	14·20	14·56	14·92	100
Actual circulation for the year ending Aug. 1852....	54·34	14·13	14·92	16·61	100

4. I have one feature more to notice in these Returns—that is, the amount of gold and silver kept by the banks, in order to meet the payment of their notes.

For several years past, the Act of 1845 has not required the Irish banks to keep any amount of gold or silver, for they have always been below the authorised circulation; but another act, passed in the year

1828, through the influence of Mr Spring Rice—now Lord Monteagle—requires that all notes should be payable in gold on demand at the place of issue. The gold and silver kept by the banks have only been to the amount that they deemed necessary and prudent for the purposes of business.

Table showing the Proportionate Amount per Cent. of Gold and Silver, as compared with the Circulation of Notes, kept by the respective Banks during the following Years, ending August:—

Years.	All the Banks.	Bank of Ireland.	Provincial Bank.	National Banks.	Belfast Banks.
1847....	31·44	25·28	41·77	35·97	42·42
1848....	31·73	25·22	47·59	38·54	36·49
1849....	36·62	30·08	52·17	43·00	42·55
1850....	33·75	27·95	47·88	39·59	37·93
1851....	29·05	24·27	38·71	34·24	32·87
1852....	26·21	22·40	35·68	26·65	30·23

We observe from this table that the annual average amount of gold and silver kept by all the banks has varied from 29 to 36 per cent. We observe, too, that in the years when the circulation has been low, the amount of gold and silver has been higher in proportion than in those years when the circulation has been high. Taking the average of years from 1847 to 1851, the *lowest* amount of gold, in proportion to its circulation, has been kept by the Bank of Ireland. The proportion varies from 24 per cent. in 1851, to 30 per cent. in 1849. The highest proportion has been kept by the Provincial Bank. It has varied from 38 per cent. in 1851, to 52 per cent. in 1849. We may also state that, in the monthly variations, the lower the circulation, the higher the proportionate amount of gold and silver. This arises, it may be presumed, from the circumstance that the banks do not vary the amount of their gold and silver with every variation of the circulation. The proportion of silver to gold kept by all the banks has varied from 20 to 33 per cent., but the proportion varies very much with different banks.*

The amount of gold necessary to be kept against any given amount of notes in circulation, is purely a question of management, and depends upon a variety of circumstances. The degree of public confidence the bank may have acquired, the excitable character of the population, the state of commercial credit, the facility of obtaining supplies, and the rapidity of communication with its branches, are all to be taken into calculation by a prudent banker. Gold can now be so readily obtained from England by means of steam-boats, and distributed throughout Ireland by means of railways, that so large an amount may not be so necessary as formerly. The railways and the

* See Table IV. in the Appendix.

electric telegraph are useful to bankers, and present another instance of the utility of scientific discoveries to men of business.

5. I shall conclude this paper by inquiring in what way will the recent discovery of gold in California and Australia practically effect the operations of the banks in Ireland.

These banks now obtain a low rate of interest on that portion of their funds which they employ in London.

So long as fresh importations of gold take place in London, and the Bank of England shall be compelled by law to purchase all the gold imported, so long will the rate of interest be low in the London money-market. For the notes issued in the purchase of this gold is thrown at first into the hands of the London bankers or money-dealers, and its abundance, in proportion to the demand, reduces the rate of interest at which it is lent. As the Irish banks keep their reserves in London, they must, in order to have securities at all times available, be content to take this low rate of interest. But there are several circumstances which would lead us to suppose that the banks will be disposed to diminish their funds in London, as far as prudently they may, and to employ a larger portion in making advances in Ireland.

The abundance of money in England, and the low rate of interest that can be obtained for it there, will naturally have a tendency to drive it for employment to Ireland. New associations will probably be formed to constitute public works, such as railways, &c., in Ireland, or to carry on those branches of manufacture or commerce that can advantageously be carried on by public companies. These associations, by the capital they bring into the country, by the new operations they may introduce, by the confidence they may infuse, and even by the occasional advances they may need, will be useful to the banks and to the country.

The circumstances of Ireland, too, are favourable to this further employment of capital in Ireland. The Encumbered Estates Bill has broken down large estates, and placed them in the hands of parties who are in a condition to improve them. Large land proprietors, who are nominally in possession of great estates, which are mortgaged for more than they are worth, are not desirable customers to a bank, nor are pauper cultivators, who are always behind in their rents; but the cultivators of moderate sized estates, which they have purchased by the results of previous industry, and who have skill and prudence to cultivate them with advantage, are parties to whom banks may advance additional capital, with advantage to themselves and to the country. This is the class that forms "a nation's pride;" and to this class the banks of Ireland may in the spirit, if not in the form of the cash-credit system, make such advances as shall produce in Ireland the same beneficial effects which that system has produced in Scotland.

Another circumstance is favourable to the advance of capital by the banks. From the extent of emigration, many instances must have occurred of small farms being united and constituting large ones. The occupiers of these large farms will be a superior class of people, and more worthy of credit and confidence. A banker may readily and prudently grant assistance to the occupier of a large farm, formed

of ten small farms, though he could not prudently give assistance to any one of the ten by whom the small farms were cultivated.

The state and condition of the banks of Ireland are favourable to their efficiency in promoting the prosperity of the country.

The history of banking proves that it is better for a country to have a small number of large banks than a large number of small banks. The latter case has never been a natural production, but has been the result of injudicious legislation. The banks in Ireland are sufficiently strong to command public confidence, and have the means of increasing their capital, and extending their branches. They are numerous enough to prevent monopoly, and yet few enough to be protected against the spirit of excessive competition. No new bank of issue can be formed. Though this prohibition is, as we conceive, a violation of a sound general principle, yet it is one of those practical enactments which seem to show that, in political economy, some of its general principles, or, as they are called, abstract principles, admit occasionally of beneficial exceptions. This law serves to prevent the formation of weak banks, which might inflict on the country the evils of excessive competition; and as in the case of the Agricultural Bank of 1836, might weaken public confidence in better establishments. A strong confidence in its banking institutions, as in Scotland, is the growth of generations; and, when justified by the character of the banks themselves, is a powerful cause of national prosperity. Banks thus situated, having no reason to be anxious about their own safety, can, in seasons of distress, employ the whole of their resources to alleviate the public calamity.

From all these circumstances, we are led to believe that we may expect in future years a high degree of prosperity for Ireland, arising from the administration of her banking intitutions.*

* Upon the Act of 1845, for the Regulation of Banks in Ireland, we may observe:—

1. The authorised issue is like that of the banks of Scotland, the average amount of the year ending on the 1st day of May, 1845.

2. If any two banks unite, the new bank may issue to the amount of the circulation of both the united banks. Here the law is the same as that of Scotland, but different from that of England.

3. If any bank gives up its issue, and agrees to issue Bank of Ireland notes, the Bank of Ireland may increase her authorised issue to the full amount of the issue of the bank whose notes are withdrawn. In England, the Bank of England can, in a similar case, issue only to the extent of two-thirds of the issue of the bank whose notes are withdrawn. There is no similar provision in the Act referring to Scotland.

4. Another difference may be noticed between Ireland and Scotland. All the notes issued at the branch-banks in Scotland are payable only at the head-office of the bank that issued them. In Ireland, all the notes are legally demandable in gold at the branches where they have been issued. Hence the banks in Ireland must keep some gold at every branch, while the banks in Scotland need not have any gold except at the head-office. In both countries the banks must hold a stock of gold equal to the amount of notes in circulation beyond the anthorised issue; and according to the Act, this gold must be at the head-office, or chief place of issue. In the Provincial Bank of Ireland, these places are Cork, Limerick, Dublin, and Belfast.—*Gilbart's Practical Treatise on Banking*, vol. ii. p. 608.

APPENDIX.

Table I.

The Population of Ireland in 1841 *and* 1851.

Provinces.	1841.	1851.	Decrease.
Ulster	2,386,373	2,004,289	382,084
Leinster	1,973,731	1,667,771	305,960
Munster	2,396,161	1,831,817	564,344
Connaught	1,418,859	1,011,917	406,942
Totals....	8,175,124	6,515,794	1,659,330

Table II.

Showing the Proportionate Circulation of each Bank, as compared with their Authorised Circulation, in January and August in each Year.

Name of Bank.	1846.		1847.		1848.		1849.	
	Jan.	Aug.	Jan.	Aug.	Jan.	Aug.	Jan.	Aug.
All the Banks	116·4	101·9	118·3	80·20	81·78	67·88	73·56	60·32
Bank of Ireland	116·3	103·7	112·7	83·12	82·64	70·60	72·70	62·61
Provincial Bank	124·4	111·3	129·3	83·09	86·83	69·48	77·67	59·20
National Banks	105·2	95·87	127·7	81·59	76·53	62·51	70·73	57·02
Belfast Banks	119·8	90·15	121·7	62·67	77·69	59·43	75·81	54·66

Name of Bank.	1850.		1851.		1852.	
	Jan.	Aug.	Jan.	Aug.	Jan.	Aug.
All the Banks	73·50	64·18	75·26	62·61	73·66	69·19
Bank of Ireland	71·99	65·30	70·78	61·68	66·46	66·90
Provincial Bank	72·36	61·38	74·14	58·56	71·83	65·79
National Banks	74·72	65·77	81·64	64·80	81·58	74·38
Belfast Banks	80·24	60·65	90·05	68·98	99·76	77·88

TABLE III.

Showing the Proportion of Large and Small Notes Circulating in January and August in each of the following Years :—

Date.	Large.	Small.	Total.
1846, January.....	41·06	58·94	100
,, August	45·67	54·33	100
1847, January.....	41·93	58·07	100
,, August	52·39	47·61	100
1848, January.....	48·17	51·83	100
,, August	54·79	45·21	100
1849, January.....	49·28	50·72	100
,, August	55·05	44·95	100
1850, January.....	47·28	52·72	100
,, August	52·20	47·80	100
1851, January.....	45·48	54·52	100
,, August	50·63	49·37	100
1852, January.....	43·73	56·27	100
,, August	50·61	49·39	100

TABLE IV.

Proportion of Gold to Silver held by each Bank during the Years ending December, 1847 to 1851.

Name of Bank.	1847.		1848.		1849.		1850.		1851.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
All the Banks ...	79·60	20·40	66·45	33·55	67·67	32·33	70·88	29·12	74·83	25·17
Bank of Ireland...	82·85	17·15	62·17	37·83	63·51	36·49	69·16	30·84	72·54	27·46
Provincial Bank...	78·39	21·61	69·73	30·27	68·05	31·95	70·50	29·50	75·50	24·50
National Banks...	75·32	24·08	67·30	32·70	76·81	23·19	72·59	27·41	74·88	25·12
Belfast Banks ...	76·03	23·97	74·80	25·20	71·35	28·65	75·01	24·99	80·40	19·60

TABLE V.

Statement of Circulation and Stocks of Specie of Banks of Issue in Ireland, for the Four Weeks ending August 7th, 1852.

Banks.	Certified Issue.	£5 and upwards.	Under £5.	Total.	Gold.	Silver.	Total.
	£	£	£	£	£	£	£
Bank of Ireland	3,738,428	1,632,500	868,500	2,501,000	419,817	155,801	575,618
Provincial Bank	927,667	251,380	358,976	610,356	174,712	56,359	231,071
Belfast Bank	281,611	40,286	224,262	264,548	101,361	41,643	143,004
Northern Bank	243,440	22,045	143,770	165,815	40,290	14,980	55,270
Ulster Bank.....	311,079	25,267	195,591	220,858	43,954	6,700	50,654
National Bank.....	761,757	237,446	357,372	594,818	113,818	46,258	160,076
Do. Carrick-on-Suir	24,084	4,717	7,087	11,805	3,144	905	4,049
Do. Clonmel	66,428	11,842	15,413	27,255	5,396	1,535	6,931
Totals	6,354,494	2,225,483	2,170,971	4,396,455	902,492	324,181	1,226,673

On the Census of the Islands of Bombay and Colaba, taken on the 1st of May, 1849, by Captain Baynes, Superintendent of Police. By Colonel Sykes, F.R.S.

[Read before the Statistical Section of the British Association at Belfast, 2nd September, 1852.]

The entire population of the islands of Bombay and Colaba, as numbered on the night of the 1st of May, 1849, amounts to no less than 566,119 persons; of these, it is stated that 354,090 are males, and only 212,029 females. The Hindoos amount to 296,931, or very considerably more than one-half of the entire population. The Mussulmans are more numerous than the Parsees, but the excess is less than 10,000, and each of these persuasions numbers in its ranks more than one-fifth of the inhabitants of the island. The entire number of Europeans, Indo-Europeans, native Christians and Jews, amount to more than 20,000. No distinction, however, appears to have been made between those born on the island or mainland, or elsewhere, nor between permanent residents and mere sojourners, nor is there (as on occasion of the census of 1833) a column to show the number of vagrants, nor any statement of the number of houses.

The population of the different divisions, as might have been expected, is shown to be exceedingly varied in extent and composition. The second, or the native town, to the east of the Bhendy Bazaar, contains considerably more than two-fifths of the entire population of the island; next in density, comes the third division, comprising the west of the native town. The Fort and Colaba division stands third.

The most unusual feature in the returns is the immense excess of males over females. The former, as already noticed, are given at 354,090, the latter, at only 212,029, being a proportion of only 59 per cent. throughout the island. In Europe, it is well known, that the number of females is generally in excess of the males. This rule, it is true, does not appear to hold good in this country, for in all recent population returns of Zillahs, and in the mortuary returns of the island of Bombay, the males are considerably more numerous. But in no instance is the difference anything like so great as in the present; not even in those districts where the prejudice against a numeration of females may be regarded as strongest, or where the practice of female infanticide is most certainly known to prevail.*

* Amongst the Rajpoot tribes of Kattywar and elsewhere in India, amongst Rajpoots, female infancicide did, at one time, prevail to a very great extent. The cause of this was the pride of Rajpoot families, who, unhappily, considered themselves degraded by having a daughter arrived at puberty unmarried; but the ostentatious expense with which custom rendered it imperative to celebrate a marriage, necessarily restricted the number of these celebrations, and to obviate the chances of the future stigma of having an unmarried daughter, female infants were made away with shortly after birth. The Government, to operate upon the minds of parents, has benevolently established a marriage portion-fund, so that absolute want of means shall not be a motive for the commission of infanticide; and it is believed that the shocking practice is very considerably diminished. Moreover, the Government is ceaseless in its efforts, through the medium of its political agents in Rajpoot states, to induce the chiefs to make the practice criminal, and many of the chiefs of Kattywar, Cutch, and Rajpootan, have entered into treaties with the British Government to this end. In Bombay it is not suspected that infanticide is practised.

There are, indeed, some reasons for a partial excess of males in Bombay above the proportion of the surrounding territory, especially in the month of May, before the setting in of the rains. The seamen in Bombay harbour are mostly without wives, and the workmen in the dockyards, factories, &c., do not generally bring their families with them. The class of labourers on the public works will also contain a proportionately larger number of males than females, though there will be among them a considerable sprinkling of the latter; among the troops and camp followers too, the women will be much fewer than among an equal number of villagers, and a large proportion of male children are assembled here to attend the schools and colleges. But after making every allowance of this kind, the relative proportion, or rather disproportion of the sexes in these returns, will still appear of questionable accuracy.

The anomaly can scarcely be ascribed to any caste prejudices on the subject of females, as hitherto commonly supposed, for the order of deficiency from the caste in which the proportion of females is lowest, to that in which it is highest, is the following :—1, Seedees; 2, Europeans; 3, Hindoos; 4, native Christians; 5, Mussulmans; 6, Indo-Europeans; 7, Jains and Boodhists; 8, other castes; 9, Jews; 10, Parsees. Among the Hindoos, the proportion of females is only about 50 per cent. Among the Mussulmans, 60 per cent., and among the Parsees, about 88 per cent.

Nor is the difference to be attributed to the peculiar kind of population in any locality. For although the average of the sexes in the several divisions does vary considerably, yet in none does it rise to 75 per cent., and it is rather higher than lower in the densely peopled portions of the native town, where the work-people chiefly reside.*

In regard to ages, Captain Bayne's statements do not afford much valuable information, nor the means of deducing it. He has remarked on this head, "I found, that the generality of the ages given, are so utterly unworthy of trust, that I have thought it better to confine myself to three distinct periods; viz., from birth to 13 years, from 14 to 50 as adults, and above 50 as aged. Though this is not as minute as I could have wished, yet it has the advantage of being correct." In this passage, it is assumed that Captain Baynes has the means of testing the returns of the census, by comparison with other and more accurate sources of information. As, however, we do not learn what these sources are, and as there is no careful register of births on the island, we can hardly suppose that the value of the returns will have been much increased by any subsequent alterations.

Captain Baynes has given only three divisions of ages, children, adults, and aged. Dr. Leith, in his Mortuary returns, has been able to divide the periods of life much more minutely: his first four periods having reference to the first and second dentition; his fifth to puberty; his sixth extending to twenty years, and the remainder progressing by decennial periods up to eighty, beyond which he considers that no certain data can be expected. In the present case, of course

* The disproportion of the sexes cannot be attributed to female infanticide in Bombay, because, amongst the population, there are few of the Rajpoot castes, amongst which this atrocity is chiefly perpetrated.

such a complicated subdivision was not required. It might have been well, however, to have retained the division from 13, or rather 14, to 20 as youths, and also to have distinguished those between 50, or rather 51, and 80 from those above the latter age. In this way, the returns of any subsequent censuses will be more valuable, especially for medical purposes. They will also be more instructive to the superintendent of police himself, as the age of puberty is so low in this country, that it does not represent the age at which a man enters upon active occupations, whether for good or for evil.

In the matter of castes, the present returns are not satisfactory. The great divisions of the population have indeed been given, but there is no attempt to distinguish the subdivisions, and even incongruous religions are classed together, such as Jain, Lingaet, and Boodhist, the Lingaet alone belonging to the Hindoo system. In explanation of this omission, Captain Baynes has remarked, that from knowing the different castes, he had hoped to be able to classify them into trades, but that the people in Bombay have broken through the prejudices, so strictly adhered to elsewhere, of children following the occupation of their parents, and he was therefore compelled, after great delay and difficulty, to give up the attempt. But if all the members of one caste no longer follow the same trade in Bombay, it would still be very interesting to know their relative numbers, and to ascertain, by degrees, their respective occupations. This, indeed, would be nothing else than to trace the progress of a striking and fundamental change in the constitution of the native society of the place. It is probable, however, that Captain Baynes has over estimated the present extent of this reformation or revolution, and the difficulty of obtaining sufficient information in regard to professions.

Among the statements, is one drawn up from the data furnished by Captain Baynes, showing the relative numbers of young, adult, and aged persons in each of the different persuasions. It would appear from this, that population (as was to be expected) is progressing, in the several great classes, in a ratio generally proportionate to the abundance of females in each.* Thus the per-centage of youths

* Some of the constituents of the population are very peculiar, and have a high historical interest. The Parsees, for instance, numbering 114,698, the most industrious, enterprising, educated, intelligent, and wealthy of the inhabitants, are the descendants of the ancient fire-worshippers of Persia, who expatriated themselves at the period of the spread of Mahomedanism, and are believed to have landed in India, near to Bulsar, in the northern Konkun. They have preserved, to this day, the physical characteristics, complexion, religion, and usages, of their forefathers, and, strange to say, notwithstanding the spread of European knowledge amongst them, and the great proficiency of very many in European literature, science, and art, they continue the superstitious usages of exposing their dead on the tops of towers to be devoured by the fowls of the air, of worshipping fire, and of practising their worship with puerile and absurd ceremonials.

The Jews of Bombay, also, are not less objects of historic interest than the Parsees; they amount to 1,132, and they and their more numerous co-religionists on the Malabar coast, are probably descended from the ten tribes of the first captivity, and escaped from the cruel oppressions of their Assyrian masters to India. With rare exceptions, they are as black as the natives of the country, but have somewhat of the Jewish countenance. They possess parts of the Bible, and read it in Hebrew. They enlist in the regular native regiments, and many of them are acquainted with reading,

of both sexes among the Parsee population, is 23·4, among the Mussulmans 17·7, and among the Hindoos only 10·8. Should these results be correct, the excess of Hindoos over Parsees must be very rapidly diminishing, and it may be expected that the latter, at no very distant period, will constitute a majority of the fixed inhabitants of the island.

The low ratio of females to males, and of youths to adults, among the Hindoos, may both depend, in some degree, on the numbers of adult Hindoo sojourners, who, as labourers, &c., would still (on the 1st May) be found about the shipping, dockyard, and public works. As already remarked, however, this alone will not explain the extent of this anomaly, though it will materially diminish the proportion which the resident Hindoo population bears to the entire fixed population of the island.

Another statement shows the relative per centage of young, adult, and aged persons in each Police division. In the absence of fuller information, it may serve to indicate approximately the comparative increase of population in the different parts of the island, and the average terms of life in each, and so likewise to show their comparative sanatory state. It is curious, according to this table, that the proportions of young children and aged survivors are both largest in the B. division, or east of the native town, and the proportion of adults smallest there, although that is the most densely crowded part of the island, where epidemic diseases are most prevalent and most fatal, and which contains the temporary homes of most of the adult labouring population.

We are not yet in a position to draw any certain conclusions as to the comparative healthiness of Bombay, as indicated by the annual

writing, and cyphering; they make smart non-commissioned officers, and frequently obtain commissions as native officers. In support of the belief of these Jews belonging to the tribes of Israel, and, therefore, to the first captivity, rather than to those of Judah and the second captivity, they all have the affix of Israel to their names, such as Daodjee (David) Israel, Sullimanjee (Solomon) Israel, Maosjee (Moses) Israel, Benjaminjee (Benjamin) Israel, &c. Recently a colony of Jews has been found at Kai-fung-foo, in Honan, in China, 600 miles from Shangai, who consider that they came originally from India, and they, too, call themselves Israelites. Although possessed of the Hebrew Pentateuch and Hebrew Liturgies, they have forgotten the Hebrew language; but two of them eagerly accepted an invitation of the English missionaries at Shangai to be taught Hebrew;—these, also, may be a fragment of the ten tribes.

Another curious portion of the inhabitants of Bombay is the Lingaet Hindoos, improperly classed with the Jains and Boodhists, who are not Hindoos. They are followers of Siva, but repudiate Brahminism, and exclusively worship the Phallus, which emblem they suspend round the neck or attach to the arm, in a silver case. They originated with Bassava in the 12th century.

The Jains are an heterodox offshoot from the Boodhists, whose religion pervaded all India from the 6th century before Christ, until the 7th or 8th century after. The Juttees, or Sacerdotals, are characterised by their extreme regard for animal life, and wear a gauze veil over the mouth for fear they should swallow an insect, and carry a fan in their hands to fan away insects from the ground before they sit upon it. They do not wear a covering on the head, nor shave it, but crop the hair short like a European; and their white robe, worn like a Roman toga, and their solemn stately gait, give them an air of great dignity. With respect to the other constituents of the population of Bombay, for its narrow area, probably it exhibits a more heterogenous mixture than any other spot on the globe.

per centage of deaths. From the imperfect Mortuary returns* at his disposal, Captain Baynes was led to believe that the average for the whole island, during the year prior to this census, was about 2 per cent., which he considered to be rather a high rate in the absence of epidemic disease. On this it may be remarked, that far from being a high rate, 2 per cent. is extremely low—lower than the average mortality in any part of Great Britain. Dr. Leith, in a careful comparison of the number of registered deaths during twelve months (as shown in the more complete returns which he has since prepared) with the number of inhabitants in this census, reduces the proportion of deaths even lower than 2 per cent., notwithstanding that the bills of mortality for the year in question include a number of casualties from epidemic disease, especially cholera and small-pox. If, therefore, the returns be trustworthy, the climate of Bombay, in ordinary seasons, must be as favourable to the human constitution, for natives of the place, as almost any part of the known world, though in coming to such a conclusion, the very large floating population must not be forgotten.

On all these matters, however, further approaches to accuracy can be obtained after repeated experiments and more extensive comparison of results. It may further be observed, that the numbers as now given, viz., 566,119, is greatly in excess of the amount usually supposed to represent the population. If detached villages be included, the population of the town and harbour will, it is believed, be exceeded by few towns in Europe. According to the last returns, it is superior to any provincial town in Great Britain, and superior also to any interior city in India.

It is to be doubted, however, whether these statements contain a satisfactory approximation to the truth. But they may serve as a basis for future statistical enquiries.

The publication of these tables may be regarded as a commencement in the work of record. Even if the returns are not as full and as faithful as possible, still there are no other materials available for comparison. There are no former tables of the same kind, and no arrangements have been made for procuring them in future. There is no complete register of births, and it is only lately that a registry of deaths has been commenced. There are no migration returns, nor any information as to the supply of the necessaries of life, by which to judge whether the increase of population is restricted by a limited supply of food, or to form an opinion as to the degree of comfort and luxury enjoyed by the people, which are an index of their condition.

* Returns are now complete for 1849, 1850, and 1851. The average deaths for these years was, Boodhist, Brahmin, and Lingaet ..... 11·92 per cent.

Hindoo, eating flesh	2·29	,,
Mussulmans	2·15	,,
Parsee	0·64	,,
Native Christian, Jew, and Indo-European	3·64	,,
Europeans	5·23	,,
Average of all Castes	2·11	,,

Ages—Under 14	5·58	per cent.
,, 14 to 50	1·33	,,
,, Above 50	2·29	,,

Census of the Islands of Bombay and Colaba, as enumerated on the 1st of May, 1849.

Castes.	Males.				Females.				Total.
	Under 14.	14 to 50 inclusive.	Above 50.	Total at all Ages.	Under 14.	14 to 50 inclusive.	Above 50.	Total at all Ages.	
A Division.									
Jain, Lingaet, Boodhist	20	86	4	110	16	39	5	60	170
Brahmin	50	38	1	89	24	23	10	57	146
Hindoos of other Castes	95	18,501	913	19,509	71	11,249	734	12,054	31,563
Mussulman	214	1,031	84	1,329	176	421	66	663	1,992
Parsee	4,005	20,432	1,911	26,348	3,644	14,693	1,910	20,247	46,595
Jew	3	65	18	86	3	30	2	35	121
Native Christian	52	316	11	379	25	232	10	267	646
Indo-Briton	79	140	13	232	105	102	4	211	443
Indo-Portuguese	65	535	10	610	35	156	7	198	808
Pure European	90	1,196	56	1,342	118	1,156	28	1,392	2,634
Seedee, or Negro African	12	102	....	114	4	15	....	19	133
Other Castes	171	379	60	610	150	185	3	338	948
Totals	4,856	42,821	3,081	50,758	4,371	28,301	2,779	35,451	86,209
B Division.									
Jain, Lingaet, Boodhist	6	33	8	47	5	18	....	23	70
Brahmin	217	567	76	860	110	326	66	502	1,362
Hindoos of other Castes	14,164	57,254	19,217	90,635	6,251	25,178	9,912	41,341	131,976
Mussulman	9,518	14,237	7,224	30,979	8,724	11,145	7,179	27,048	58,027
Parsee	6,295	6,676	5,898	18,869	6,182	6,491	5,765	18,438	37,307
Jew	151	279	63	493	136	269	69	474	967
Native Christian	180	452	2	634	130	255	14	399	1,033
Indo-Briton	20	37	8	65	17	24	7	48	113
Indo-Portuguese	77	268	45	390	116	149	36	301	691
Pure European	9	63	1	73	18	31	....	49	122
Seedee, or Negro African	18	147	5	170	6	25	3	34	204
Other Castes	198	648	69	915	174	312	72	558	1,473
Totals	30,853	80,661	32,616	144,130	21,869	44,223	23,123	89,215	233,345

A Division includes Colaba, the Fort, and the Esplanade.

B Division is bounded on the South by the Esplanade, on the West by the Kalbadavee and Bhendy Bazaar Roads, on the North by the Baboola Tank and Wall Packaree Road to Warree Bunder, and on the East by the Harbour, and includes the following places: the Market, Hunumon Gulies, Gunnesh and Wittulwady's, Parsee Wada, Memon Wada, Coli Wada, Rungary, Mhola, Old Combar Wada, Tonton Poora, Khudduck and Dungary Bazaar, Bengalpoora, Old Nagpada, Chinch Bunder, Chunam Kiln Row, New and Old

Castes.	Males.				Females.				Total.
	Under 14.	14 to 50 inclusive.	Above 50.	Total at all Ages.	Under 14.	14 to 50 inclusive.	Above 50.	Total at all Ages.	
C Division.									
Jain, Lingaet, Boodhist	171	625	67	863	225	429	64	718	1,581
Brahmin	535	2,018	352	2,905	397	1,154	104	1,655	4,560
Hindoos of other Castes	3,615	32,652	2,178	38,445	3,264	28,466	2,085	33,815	72,260
Mussulman	1,136	14,563	344	16,043	960	4,135	285	5,380	21,423
Parsee	3,107	10,972	426	14,505	3,459	10,956	235	14,650	29,155
Jew	3	10	2	15	2	5	3	10	25
Native Christian	27	1,714	54	1,795	174	196	54	424	2,219
Indo-Briton	62	97	16	175	28	58	6	92	267
Indo-Portuguese	165	637	51	853	118	658	34	810	1,663
Pure European	48	141	14	203	38	58	2	98	301
Seedee, or Negro African	19	29	13	61	15	33	25	73	134
Other Castes	203	955	117	1,275	347	754	134	1,235	2,510
Totals	9,091	64,413	3,634	77,138	9,027	46,902	3,031	58,960	136,098
D Division.									
Jain, Lingaet, Boodhist	....	....	....	....	....	....	....	....	....
Brahmin	60	210	15	285	30	89	6	125	410
Hindoos of other Castes	25	1,986	188	2,199	112	629	156	897	3,096
Mussulman	12	42	....	54	19	35	1	55	109
Parsee	41	135	6	182	61	89	12	162	344
Jew	....	....	....	....	....	....	....	....	....
Native Christian	1	13	....	14	1	13	....	14	28
Indo-Briton	....	2	....	2	....	....	....	....	2
Indo-Portuguese	23	83	....	106	18	29	5	52	158
Pure European	17	51	1	69	9	31	....	40	109
Seedee, or Negro African	....	....	....	....	....	....	....	....	....
Other Castes	5	198	2	205	5	111	2	118	323
Totals	184	2,720	212	3,116	255	1,026	182	1,463	4,579

C Division is bounded on the North by the Grant and Obelisk Roads, on the East by the Bhendy Bazaar, and Kalkadavee Roads, along the North of Marine Lines, to Backbay, on the South-West by Backbay, and on the West by the Back Girgaum Road to New Chowpatee, and includes the Washerman's Tank, or Girgaum Road, New and Old Sonapoor, English, Mussulman, and Hindoo Burying Grounds, Kalbadavee, Bhooleshwur, Funuswady, Mangelwady, Bhoemadas, Nizampoora, part of New Nagpada, Israel Poora, New Coomburwada, Duncan Road, Null Bazaar, Khetwady, New Chunam Kiln Row, Parsee Wada, Girgaum Back Road, Kakurwaree, Candawady, and Churney Wadies.

D Division contains Girgaum, Chowpaty, Tardeo, Breach Candy, Gowala and Cambala Tank Road, Malabar Hills, and Gowndavee.

Census of the Islands of Bombay and Colaba, as enumerated on the 1st of May, 1849.—Continued.

Castes.	Males.				Females.				Total.
	Under 14.	14 to 50 inclusive.	Above 50.	Total at all Ages.	Under 14.	14 to 50 inclusive.	Above 50.	Total at all Ages.	
E Division.									
Jain, Lingaet, Boodhist	3	18	7	28	2	8	7	17	45
Brahmin	14	63	10	87	11	36	2	49	136
Hindoos of other Castes	59	13,071	619	13,749	759	3,086	733	4,578	18,327
Mussulman	290	16,043	392	16,725	812	11,941	434	13,187	29,912
Parsee	46	324	35	405	89	79	45	213	618
Jew	....	....	....	....	....	....	....	....	....
Native Christian	62	128	76	266	74	55	8	137	403
Indo-Briton	82	190	20	292	82	20	25	127	419
Indo-Portuguese	52	227	10	289	20	61	17	98	387
Pure European	98	136	20	254	35	24	13	72	326
Seedee, or Negro African	2	5	1	8	2	6	1	9	17
Other Castes	236	438	37	711	237	447	44	728	1,439
Totals	944	30,643	1,227	32,814	2,123	15,763	1,329	19,215	52,029
F Division.									
Jain, Lingaet, Boodhist	....	3	....	3	....	1	....	1	4
Brahmin	28	88	28	144	48	88	11	147	291
Hindoos of other Castes	1,036	17,169	27	18,232	1,029	3,628	27	4,684	22,916
Mussulman	40	5,339	47	5,426	30	350	40	420	5,846
Parsee	2	16	3	21	2	17	2	21	42
Jew	1	3	....	4	1	....	....	1	5
Native Christian	468	868	73	1,409	468	868	68	1,404	2,813
Indo-Briton	2	11	2	15	3	10	2	15	30
Indo-Portuguese	250	456	50	756	260	460	30	750	1,506
Pure European	2	16	1	19	3	14	2	19	38
Seedee, or Negro African	2	10	1	13	3	11	....	14	27
Other Castes	46	93	6	145	46	86	6	138	283
Totals	1,877	24,072	238	26,187	1,893	5,533	188	7,614	33,801

E Division contains Mazigaum, Camatee Poora, Byculla, the Flats, the Mount, Colee Waree, Shinal Pada, Cheech Pogley, Lall Bag, Soopary Baug, Small Sewree, Parell, and part of Bhoewada.

Census of the Islands of Bombay and Colaba, as enumerated on the 1st of May, 1845.—Continued.

Castes.	Males.				Females.				Total.
	Under 14.	14 to 50 inclusive.	Above 50.	Total at all Ages.	Under 14.	14 to 50 inclusive.	Above 50.	Total at all Ages.	
Water Division.									
Jain, Lingaet, Boodhist	....	32	....	32	....	....	....	....	32
Brahmin	....	31	....	31	....	....	....	....	31
Hindoos of other Castes	275	9,489	45	9,809	1	47	....	48	9,857
Mussulman	102	6,663	38	6,803	6	37	....	43	6,846
Parsee	....	637	....	637	....	....	....	....	637
Jew	....	14	....	14	....	....	....	....	14
Native Christian	....	313	....	313	....	1	....	1	314
Indo-Briton	1	55	....	56	....	3	....	3	59
Indo-Portuguese	16	186	....	202	....	2	....	2	204
Pure European	25	1,506	4	1,535	2	11	....	13	1,548
Seedee, or Negro African	1	371	1	373	....	1	....	1	374
Other Castes	....	142	....	142	....	....	....	....	142
Totals	420	19,439	88	19,947	9	102	....	111	20,058

Water Division contains the whole of the Harbour, from the Light House to Sewree Bunder.

Statement showing the Population and Per-Centage of Young, Adult, and Aged Persons in each Police Division.

Divisions.	Under 14.				14 to 50 inclusive.				Above 50.				Total at all Ages.		
	Males.	Females.	Total.	Proportion of Youths to Total.	Males.	Females.	Total.	Proportion of Adults to Total.	Males.	Females.	Total.	Proportion of Aged to Total.	Males.	Females.	Total.
A	4,856	4,371	9,227	10·7	42,821	28,301	71,122	82·4	3,081	2,779	5,860	6·7	50,758	35,451	86,209
B	30,853	21,869	52,722	22·5	80,661	44,223	124,884	53·5	32,616	23,123	55,739	23·8	144,130	89,215	233,345
C	9,091	9,027	18,118	13·3	64,413	46,902	111,315	81·7	3,634	3,031	6,665	4·8	77,138	58,960	136,098
D	184	255	439	9·5	2,720	1,026	3,746	81·8	212	182	394	8·6	3,116	1,463	4,579
E	944	2,123	3,067	5·8	30,643	15,763	46,406	89·1	1,227	1,329	2,556	4·9	32,814	19,215	52,029
F	1,877	1,893	3,770	11·1	24,072	5,533	29,605	87·5	238	188	426	1·2	26,187	7,614	33,801
Water	420	9	429	2·1	19,439	102	19,541	97·4	88	....	88	4	19,947	111	20,058
Totals	48,225	39,547	87,772	15·5	264,769	141,850	406,619	71·8	41,096	30,632	71,718	12·6	354,090	212,029	566,119

Statement showing the Number of Males and Females of all Ages, and their Proportion to each other, in each Police Division, classified according to Caste.

Divisions.	Jain, Lingaet, or Boodhists.				Brahmins, and other Castes of Hindoos.				Mussulmans.			
	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.	Proportion of Females to 100 Males.
A	110	60	170	54	19,598	12,111	31,709	61	1,329	663	1,992	49
B	47	23	70	48	91,495	41,843	133,338	45	30,979	27,048	58,027	87
C	863	718	1,581	83	41,350	35,470	76,820	82	16,043	5,380	21,423	33
D	...	...	...	...	2,484	1,022	3,506	41	54	55	109	101
E	28	17	45	60	13,836	4,627	18,463	33	16,725	13,187	29,912	78
F	3	1	4	33	18,376	4,831	23,207	26	5,426	420	5,846	7
W.....	32	...	32	...	9,840	48	9,888	...	6,803	43	6,846	...
Totals...	1,083	819	1,902	75	196,979	99,952	296,931	50	77,359	46,796	124,155	60

Divisions.	Parsees.				Jews.				Native Christians.			
	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.	Proportion of Females to 100 Males.
A	26,348	20,247	46,595	76	86	35	121	40	379	267	646	70
B	18,869	18,438	37,307	97	493	474	967	96	634	399	1,033	62
C	14,505	14,650	29,155	101	15	10	25	67	1,795	424	2,219	23
D	182	162	344	89	...	...	...	...	14	14	28	100
E	405	213	618	52	...	...	...	...	266	137	403	51
F	21	21	42	100	4	1	5	25	1,409	1,404	2,813	99
W.....	637	...	637	...	14	...	14	...	313	1	314	...
Totals...	60,967	53,731	114,698	88	612	520	1,132	84	4,810	2,646	7,456	55

Divisions.	Indo-Europeans.				Pure Europeans.				Seedee, or Negro Africans.			
	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.	Proportion of Females to 100 Males.
A	842	409	1,251	48	1,342	1,302	2,644	97	114	19	133	16
B	455	349	804	76	73	49	122	67	170	34	204	20
C	1,028	902	1,930	87	203	98	301	44	61	73	134	119
D	100	52	160	52	69	40	109	57	...	...	...	...
E	581	225	806	38	254	72	326	28	8	9	17	112
F	771	765	1,536	99	19	19	38	100	13	14	27	107
W.....	258	5	263	1	1,535	13	1,548	...	373	1	374	...
Totals...	4,043	2,707	6,750	66	3,495	1,595	5,088	45	739	150	889	20

Divisions.	Other Castes.				Total of each Division.			
	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.	Proportion of Females to 100 Males.
A	610	338	948	55	50,758	35,457	86,209	566
B	915	558	1,473	60	144,130	89,215	233,345	658
C	1,275	1,235	2,510	96	77,138	58,960	136,098	740
D	205	118	323	57	3,116	1,463	4,579	492
E	711	728	1,439	102	32,814	19,215	52,029	554
F	145	138	283	95	26,187	7,614	33,801	691
W.....	142	...	142	...	19,947	111	20,058	1
Totals...	4,003	3,115	7,118	77	354,090	212,029	566,119	59

Statement showing the Numbers of Young, Adult, and Aged Persons of the different Persuasions.

Caste.	Under 14 Years.				Under 51 Years.			
	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.	Proportion of Females to 100 Males.
Jain, Lingaet, or Boodhists	200	248	448	124	797	495	1,292	60
Brahmins and other Castes of Hindoos	20,173	12,107	32,280	60	153,137	73,999	207,136	48
Mussulmans	11,312	10,727	22,039	84	57,918	28,064	85,982	48
Parsees	13,496	13,437	26,933	99	39,192	32,325	71,517	82
Jews	158	142	300	89	371	304	675	81
Native Christians	790	872	1,662	110	3,804	1,620	5,424	42
Indo-Europeans	894	802	1,696	89	2,924	1,732	4,656	59
Pure Europeans	289	223	512	77	3,109	1,325	4,434	42
Seedee, or Negro Africans	54	30	84	55	664	91	755	13
Other Castes	859	959	1,818	111	2,853	1,895	4,748	67
Totals	48,225	39,547	87,772	82	264,769	141,850	406,619	53·5

Caste.	Under 81 Years.				Total.			Proportion of Youths to Total.	Proportion of Adults to Total.	Proportion of Aged to Total.
	Males.	Females.	Total.	Proportion of Females to 100 Males.	Males.	Females.	Total.			
Jain, Lingaet, or Boodhists	86	76	162	88	1,083	819	1,902	23·5	67·9	8·5
Brahmins and other Castes of Hindoos	23,669	13,846	37,515	58	196,979	99,952	296,931	10·8	69·7	12·6
Mussulmans	8,129	8,005	16,124	98	77,359	46,796	124,155	17·7	69·0	12·9
Parsees	8,279	7,969	16,248	90	60,967	53,731	114,698	23·4	62·3	14·1
Jews	83	74	157	89	612	520	1,132	26·5	59·6	13·8
Native Christians	216	154	370	71	4,810	2,646	7,456	22·2	72·7	4·9
Indo-Europeans	225	173	398	76	4,043	2,707	6,750	25·1	68·9	5·8
Pure Europeans	97	45	142	46	3,495	1,593	5,088	10·0	87·1	2·7
Seedee, or Negro Africans	21	29	50	138	739	150	889	9·4	84·9	5·6
Other Castes	291	261	552	89	4,003	3,115	7,118	25·5	66·7	7·7
Totals	41,096	30,632	71,718	74·5	354,090	212,029	566,119	15·5	71·8	12·6

Summary of the Census of the Islands of Bombay and Colaba, showing the Number of each Caste.

Castes.	Males.			Females.			Total at all Ages.		
	Under 14.	14 to 50 inclusive.	Above 50.	Under 14.	14 to 50 inclusive.	Above 50.	Males.	Females.	Total.
Jain, Lingaet, or Boodhist	200	797	86	248	495	76	1,083	819	1,902
Brahmin	904	3,015	482	620	1,716	199	4,401	2,535	6,936
Hindoos of other Castes	19,269	150,122	23,187	11,487	72,283	13,647	192,578	97,417	289,995
Mussulman	11,312	57,918	8,129	10,727	28,064	8,005	77,359	46,796	124,155
Parsee	13,496	39,192	8,279	13,437	32,325	7,969	60,967	53,731	114,698
Jews	158	371	83	142	304	74	612	520	1,132
Native Christian	790	3,804	216	872	1,620	154	4,810	2,646	7,456
Indo-Briton	246	532	59	235	217	44	837	496	1,333
Indo-Portuguese	648	2,392	166	567	1,515	129	3,206	2,211	5,417
Pure European	289	3,109	97	223	1,325	45	3,495	1,593	5,088
Seedee, Negro, African	54	664	21	30	91	29	739	150	889
Other Castes	859	2,853	291	959	1,895	261	4,003	3,115	7,118
Totals	48,225	264,769	41,096	39,547	141,850	30,632	354,090	212,029	566,119

On Irish Emigration, with especial reference to the working of the Incumbered Estates Commission. By John Locke, Esq.

[Read before the Statistical Section of the British Association, at Belfast, 3rd September, 1852.]

The agricultural blight of 1846, which swept away the staple food of the Irish peasantry, initiated a series of events, that promise to result in a total revolution of the social and industrial condition of Ireland. Not only the love of country, but the rude agrarian links, that bound the peasant to his farmstead, at whatever desperate risk, were completely broken by the loss of the potato crop; and, following close upon the steps of famine, came that emigration, so unprecedented in extent, as to be termed by journalists *the National Exodus;* and which now appears to be annually increasing beyond the supply from births and emigration, the circle of attraction being widened by every emigrant, whose first savings are almost invariably transmitted to the parent country, for the purpose of defraying the passage-money of relatives and friends; the remittances from North America to Ireland, in 1851, intended mainly for this purpose, amounting to the enormous sum of 990,000*l.**

According to the twelfth report of the Colonial Land and Emigration Commissioners, the total decrease in the population between 1841 and 1851 was 1,659,330, and the emigration within the same period 1,289,133, or more than three-fourths of this decrease. Again, by the last census, the population of Ireland on March 31st 1850, was 6,515,794, and, assuming the rate of increase by births at 1 per cent. per annum, it would give an annual addition of only 65,157: but the number of emigrants in 1851 is estimated at 257,372, or about double the average emigration of the preceding ten years, whilst it exceeds any probable increase of the population by nearly four to one; and this disproportion is still further aggravated by the fact, that the outflow is of vigorous adults (male and female in nearly equal numbers), by whom population is mainly sustained, while orphaned infancy, destitution, and old age, an unprolific remnant, are left behind. The attraction of the gold-fields abroad, and the number of evictions at home, also contribute largely to swell the tide of emigration; and both these causes are on the increase, new gold districts being discovered, and proprietors of land, especially those who have purchased under the Encumbered Estates Court, finding the consolidation of farms a necessary preliminary to the introduction of an improved system of agriculture. This policy is, indeed, sometimes adopted with as little discretion as humanity, for tenancy must be considered in most instances as the indispensable instrumentality of production and profit, few purchasers being either willing to farm their land, or competent to so with advantage. There *may* be difficulty in finding a new tenant, but there *can* be no mistake in keeping and encouraging one who is inclined to improve.

If then Irish expatriation proceed in this accelerating ratio (and the number of emigrants for the first four months of 1852 (76,370)†

* Twelfth Report of the Colonial Land and Emigration Commissioners, pp. 9—12, and p. 68.

† See Twelfth Report of the Colonial Land and Emigration Commissioners, before referred to.

appears to warrant such an inference) a simple sum in arithmetical progression suffices to demonstrate, that the country will be denuded of its agricultural population in a very few years. There is no doubt, indeed, that the change is usually a beneficial one for the emigrants themselves, tending to develop, by many favourable opportunities, and urgent motives of action, their moral capabilities, and latent intellect; and rejecting the servile and slothful habits of a worn-out state of society for the awakening energies of a new country, that affords high remuneration for labour, and ensures to persevering industry its just measure of reward. And this observation applies especially to the inhabitants of the remote west, where the physical type has been gradually deteriorating for generations, and the inferior facial angle, and stunted size, denote degradation both of the physical and intellectual man. Where the peasantry had no knowledge of the wants of an advanced civilization, and no experience of its comforts, their food a precarious root, their dwellings of mud and straw, the result could not be otherwise; for a sordid habitude of life will dwarf the bodily frame, and penury will "chill the genial current of the soul."

An elaborate article was lately published in a French newspaper (La Presse), by M. Bertillon, proving by comparison between the former condition of the negroes and present state of that emancipated race in the West Indies, that education and liberty conduce to lengthen life, and consequently increase population; and had we time now to enter upon the subject, we might demonstrate by comparison of Ulster with Connaught, that the numbers and prosperity of a population are precisely in proportion to the extension of sound education, and the application of the principles of industry and rational freedom to the conduct of life.

We now proceed to consider the reparative agencies, that promise to check the consequences of excessive emigration; and these are, 1st, The general progress of the people, industrial, educational, and social, 2ndly, A well defined law of tenure, worked out in the spirit of its intention by the mutual good-feeling and good-sense of landlords and tenants; and 3rdly, The improvement of the labouring classes, including cottiers and small farmers, whose profits and wages have been hitherto insufficient for decent maintenance. Now, the first-mentioned is abundantly manifest in the decrease of crime and the increase of agricultural improvement and general enterprise throughout the country. Of the second, we may entertain a well-grounded expectation, the matter being in competent and zealous hands; and the diminution of poor-law taxation, and substitution of independent capitalists for distressed or insolvent landed proprietors, who were unhappily incapacitated from fulfilling the responsibilities of their position, afford strong warranty for the improvement of the labouring classes; which is, indeed, already felt in the rise of wages and progress of industry in all its departments, agricultural, manufacturing, and commercial.

To discuss all the subjects involved in our inquiry, would lead to statements and reasonings quite too numerous and tedious for a brief essay: I have therefore selected but one branch, and have now the honour to lay before the section a series of tables, together with a few statistical observations, compiled from the records of the Encumbered Estates Court, proving the importance and extent of those social and

economic changes, which have been facilitated, rather than caused, by the enactment of a law, severe indeed in its operation to some, but justified by the public exigency, and rendered unavoidable from circumstances that legislative wisdom could neither anticipate nor control.

The number of Petitions lodged for sale of estates up to July 31st, is 2,389; number of Absolute Orders for sale, to same date, 1,714; the number of Conveyances executed to August 9th, is 2,310.

From the first sale under the act, which took place February 19th 1850, to the end of July 1852, not quite two years and a half, 779 estates, or parts of estates, have been sold, in 4,062 lots, to 2,455 purchasers; so that the number of proprietors has been more than trebled; and this proportion is in fact considerably greater; for the purchases of the Ballinahinch property, and a few other large estates, are intended for division and re-sale in lots.

The quantity of land, that has already changed hands, exceeds 1,000,000 acres, or one-twentieth of the surface of the island; the total area exclusive of water amounting, according to the Ordnance Survey, to 20,177,446 acres.

In comparing the great extent of acreage with the proportionally small amount of the purchase-money, especially in the case of English purchasers (see Table II), it must be borne in mind, that a great portion of the land, especially in Mayo and Galway, consists of mountain, bog, and unreclaimed tracts.

The total proceeds of the sales is upwards of 7,000,000*l.*, and the amount distributed up to August 26th, inclusive of about 1,000,000*l.* allowed to incumbrancers, who became purchasers, is 4,248,708*l.* 11*s.* 1*d.*, or nearly two-thirds of the produce of the sales; thus, not only realizing this enormous amount of capital, hitherto locked up in barren mortgages or chancery litigation, but quickening its circulation, and facilitating its productive reinvestment in the soil. The comparison of the number of purchasers with the number of conveyances executed, and of the amount distributed with the total amount of sales, prove how diligently and satisfactorily to the public the Commissioners are accomplishing their arduous labours.

Table I.

Showing the Number and Comparative Amounts of Purchasers under the Incumbered Estates' Court.

£1,000 and under.	£1,000 to £2,000.	£2,000 to £5,000.	£5,000 to £10,000.	£10,000 to £20,000.	£20,000 and upwards.	Total.
1,040	447	549	314	83	22	2,455

By this table it appears, that the purchasers at and under 2000*l.*, are two-thirds of the whole number; thus exhibiting the practical tendency of the Act to establish an independent agricultural middle class, which is so much wanting in Ireland. The greatest amount of sales has been in Galway,—nearly a million; the least in Londonderry,—only 7015*l.* There have been only two purchases exceeding 100,000*l.*, one in Galway, and one in Queen's County.*

* Emo Park, part of Lord Portarlington's estate, purchased by himself; and the Ballinahinch Estate in Galway, purchased by the mortgagees, the Law Life Insurance Company, who will probably re-sell in lots.

TABLE II.

Showing the County, Acreage, and Amount—English and Scotch Purchasers.

Number of Estates in which English and Scotch became Purchasers	Number of Purchasers.	County.	Acreage.			Purchase-Money.			Observations.
		Leinster.	A.	R.	P.	£	*s.*	*d.*	
5	5	Dublin	.....			11,630	0	0	All for tenement-property in Dublin City.
2	2	Kildare	225	0	4	1,820	0	0	
3	3	Kilkenny	2,925	0	36	41,225	0	0	
1	1	King's County..	726	2	18	825	0	0	
2	2	Longford	2,866	1	19	7,360	0	0	
2	2	Louth	4,504	3	31	23,350	0	0	
2	2	Meath.....	1,004	0	8	13,150	0	0	
2	3	Westmeath.....	1,965	0	10	27,000	0	0	
2	2	Queen's County	599	1	21	3,000	0	0	
1	1	Wexford.....	9,887	1	24	55,200	0	0	
2	2	Wicklow....	6,308	0	23	37,825	0	0	
			31,012	0	34	222,385	0	0	
		Munster.							
10	11	Cork	10,223	2	2	86,569	12	6	This sum includes 15,168*l.* 12*s.* 6*d.* for tenement-property purchased by the Board of Inland Revenue in Cork City.
3	3	Kerry	5,384	2	12	10,250	0	0	2,500*l.* of this amount for mines.
6	8	Limerick.....	19,267	2	8	88,770	0	0	330*l.* of this amount for tithe rent-charge.
15	19	Tipperary	16,070	1	23	140,845	0	0	2,120*l.* of this amount for tithe rent-charge.
4	6	Waterford	3,396	0	4	35,965	0	0	
			54,342	0	9	362,399	12	6	
		Ulster.							
1	1	Antrim	750	0	0	23,750	0	0	
3	2	Cavan.....	4,341	0	1	24,635	0	0	
1	1	Donegal	365	1	34	2,400	0	0	
1	1	Monaghan	77	0	31	117	0	0	
2	2	Tyrone	1,851	1	16	5,020	0	0	
			7,385	0	2	55,922	0	0	
		Connaught.							
12	15	Galway	227,010	1	12	331,050	0	0	
3	3	Leitrim	3,302	1	37	14,850	0	0	
3	3	Roscommon	1,464	2	34	9,030	0	0	
7	14	Mayo	78,549	0	6	104,490	0	0	
95	114	25 Counties out of 32	310,236	2	9	459,420	0	0	

English and Scotch have purchased in every county in Ireland, except Clare in Munster, Sligo in Connaught, and Down, Armagh, Cavan, Fermanagh, and Londonderry, in Ulster.

TABLE III.

Acreage and Amounts arranged according to Provinces.

Provinces.	Acreage.			Purchase-Money.		
	A.	R.	P.	£	s.	d.
Leinster	31,012	0	34	222,385	0	0
Munster	54,342	0	9	362,399	12	6
Ulster	7,385	0	2	55,922	0	0
Connaught	310,326	2	9	455,420	0	0
Total	403,065	3	14	1,100,126	12	6

TABLE IV.

Showing the Localities from whence the Purchase-Money came.

Number of Purchasers.	Purchase-Money.			Number of Purchasers.	Purchase-Money.		
	£	s.	d.		£	s.	d.
58 from London and its vicinity	720,641	19	2	Brt. Forward	925,533	12	6
				1 from Oxfordshire	6,280	0	0
11 ,, Lancashire*	56,526	13	4	1 ,, Pembrokeshire	3,820	0	0
1 ,, Buckinghamshire	1,220	0	0	1 ,, Suffolk	5,730	0	0
				1 ,, Shropshire	7,690	0	0
4 ,, Cheshire	53,205	0	0	1 ,, Sussex	7,610	0	0
1 ,, Derbyshire	2,525	0	0	3 ,, Staffordshire	57,450	0	0
5 ,, Devonshire	14,445	0	0	1 ,, Somersetshire	2,550	0	0
1 ,, Durham	7,750	0	0	1 ,, Warwickshire	5,750	0	0
1 ,, Gloucestershire	11,830	0	0	2 ,, Yorkshire	3,517	0	0
2 ,, Hampshire	24,400	0	0	8 ,, Scotland	46,220	0	0
1 ,, Hertfordshire	11,000	0	0	1 ,, Calcutta	24,250	0	0
3 ,, Lincolnshire	5,490	0	0	3 ,, Isle of Man	1,406	0	0
1 ,, Norfolk	16,500	0	0	1 ,, America	2,320	0	0
Carried forward	925,533	12	6	114	1,100,126	12	6

* Including 39,276*l.* 13*s.* 4*d.* from Liverpool and Birkenhead.

TABLE V.

Showing the Number and Comparative Amounts of English and Scotch Purchasers.

£1,000 and under.	£1,000 to £2,000.	£2,000 to £5,000.	£5,000 to £10,000.	£10,000 to £20,000.	£20,000 and upwards.	Total.
24	18	26	21	13	12	114

Of these, one purchaser was from Calcutta, amount 24,250*l.*; three from the Isle of Man, all under 1,200*l.*; and eight from Scotland:—viz., one between 2000*l.* and 5000*l.*; and seven between 5000*l.* and 10,000*l.* Of the eight purchasers from Scotland, two were gentry and six farmers.

TABLE VI.

Showing (as accurately as can be ascertained) the Classification of these Purchasers.

Gentry, including eight Titled Persons.	Manufacturers and Merchants, including eight Firms.	Insurance and Land Companies.	Farmers.	Total.
52	36	6	20	114

It is a fact of great importance, as affecting the improvement of the far west, that English and Scotch purchasers, and farmers also, usually settle in groups. Thus, 63,000 acres of Sir R. O'Donnell's Mayo estates have been purchased by English capitalists, led by Mr. Ashworth; whose work, entitled "The Saxon in Ireland," has been so serviceable to this country. And now a large portion of Erris, and of the northern shores of Clew bay, are in the possession of Englishmen. Again, in Galway another set of English purchasers, Messrs. Twining, Ellis, Eastwood, Palmer, and others, are grouped on the shores of Ballinakil bay, and in the vale of Kylemore. Nor are our own countrymen backward in the work of improvement, nineteen-twentieths of the purchasers being Irish, and the greater number of these, especially in the west, diligently applying their capital to reclamation of the soil. Even in this prosperous province, the advantages of facilitating the sale and transmission of hopelessly incumbered property, are remarkably exemplified, the sale of the Mountcashel estate affording opportunity to the wealthy citizens of Belfast to invest their capital in land; and the sale of the Donegal estate stimulating the enterprise of manufacturers and tradesmen, by enabling them to purchase their own holdings or tenements in the borough.

We now return to our subject of English and Scotch purchases; and it will be observed, on reference to the foregoing tables, that by far the greater proportion of these is in the very districts of the far west, where the population has been most diminished, and where capital and improvement are chiefly required; three-fourths of the total average being in Galway and Mayo, and two-fifths of the total amount being invested in the same counties.

The immigration too is confessedly not of an expulsive character, abundance of unoccupied land, perished from stagnant water, or the surface of which has been only scratched in scattered patches for centuries, being in the market, and inviting the advent of more productive systems of culture.

The number of English and Scotch purchasers, as well as the amount of their investments, is also increasing. Up to January 31st

of this year, the purchasers were one-twenty-fifth* as to number, and one-tenth as to the total amount of purchase-money. On referring to these tables, we shall find, that up to July 31st the proportion as to number is one-twentieth, and as to amount, about one sixth of the total purchase-money.

It is undeniable, that the forethought, punctuality, disciplined labour, and scientific skill of the English and Scotch farmer,—what may in one word be termed industrial economy, must prove an invigorating graft on those wayward and procrastinating habits, that have for so long a period impeded the improvement of the peasantry of the south and west of Ireland.

It was not until the jealousies of Norman and Saxon merged in one common name and undivided interest, that the signs were developed in England of that progress, which has placed her at the head of the nations. And just in proportion as the invidious distinction of Celt and Saxon is forgotten in this country, and all classes, however differing in creed or opinion, are bound to each other and to the throne by the links of constitutional loyalty and social order, will a similar happy example of progress be developed in Ireland.

Additional Observations on the Valuation and Purchase of Land in Ireland. By the same Author.

[Read before the Statistical Society of London, 15th November, 1852.]

In the present transition state of property in Ireland, valuation of land, based upon correct data, is of great importance; and the writer of this paper respectfully offers the results of his information and experience on the subject, in the hope that these may be of service, especially to English and Scotch capitalists seeking investments in this country.

The Commissioners for the Sale of Incumbered Estates, in certain cases, direct a special valuation to be made by some competent valuator, on application made to them showing proper reasons for such a measure; but it is required, in every case, that the Poor Law and Government valuations should be set forth in the published rentals of estates for sale in their court. The Poor Law valuation may be comparatively useful, as a check on other valuations, in estimating the amount of purchase; but, having been originally made, or subsequently revised, by isolated individuals at different periods, without co-operation or reference to any fixed schedule of prices, it cannot be relied on as an accurate measure of value. The Government valuations were constituted under three Acts of Parliament, made respectively in 1839 (6 and 7 Wm. IV. c. 84), 1846 (9 and 10 Vict. c. 110), and 1852 (15 and 16 Vict. c. 63). The first-named, usually termed the Ordnance Valuation, was based on a fixed scale of prices of agricultural produce, and intended to form an uniform and relative valuation, the townland (the smallest denomination of land possessing permanent boundaries) being made the unit

* See a pamphlet published by Hodges and Smith, Dublin; Simpkin and Marshall, London; entitled "Ireland. Observations on the People, the Land, and the Law in 1851," (pp. 66—68,) which contains a great quantity of well-arranged and authentic information relative to the condition and prospects of Ireland.

of valuation. This system was continued until 1846, when the 9 and 10 Vict. c. 110, was passed, the valuation being made upon an estimate of the net annual value, or, in other terms, "the annual rent which each tenement might be reasonably expected to bring, all rates, insurance, repairs, and public charges (except tithe-rent charge), being paid by the tenant;" the unit of valuation being the tenement, *i. e.*, the rateable hereditament under the provisions of the Poor Law. Up to the time of the passing of this Act the valuation had been completed in twenty-six counties, and the tenement valuation of the remaining six counties, viz., Dublin, Cork, Tipperary, Limerick, Kerry, and Waterford, was in forward progress, when the legislature deemed it expedient (for reasons unnecessary to be stated in this place) that the 9 and 10 Vict. c. 110, should be repealed, save as to the completion of unfinished valuations of any baronies or Poor Law unions; and the 15 and 16 Vict. c. 63, was enacted, in order "to make one uniform valuation of lands and tenements in Ireland, which may be used for all public and local assessments and other rating;" the tenement being again constituted the unit, and a new reference standard of prices given more accordant with the changed conditions of our productive industry, flax being included, but potatoes omitted, in the new schedule; and the valuations previously made remaining fixed, until revised under this Act, in such manner as to present one uniform scale of value, based on the altered table of prices. Then the valuation of each Poor Law union, county, or barony, when finally ratified, is to continue in force for fourteen years, at the termination of which period any of these divisions may undergo revision, upon suitable representations made to that effect by grand juries, and approved by the Lord Lieutenant of Ireland. The execution of the provisions of this Act has been entrusted to the same efficient agency that conducted the former valuations, thus securing a certain uniformity in principle and practice, by employment of the same instrumentality.

These legislative amendments, so rapidly following each other, and, in fact, necessitated by the revolution in our social and agricultural condition, are not, however, found to destroy the relative utility of the ordnance valuation, inasmuch as the letting value may be fairly deduced by the ordinary rules of proportion, comparing the annual average of current prices with those of the standard scale in the Act. Indeed, the importance of this valuation to purchasers and proprietors, either in calculating marketable price or letting value, does not appear to be duly estimated. At the head of the work was an indefatigable man of business, whose extensive practical knowledge of the geological structure of Ireland afforded the soundest data for ascertaining the productive capabilities of its soils. Mr. Griffith's private instructions to his valuators form, perhaps, the most lucid and instructive guide to the practice of valuation that has yet appeared; and the correctness and assiduity with which these were carried out, under the guarantees of sundry appeals and revisions, are unquestionable.

It must be observed, however, that the abandonment of potato cultivation on poor land, especially shallow and undrained soils near the sea coast, where the tilth involved little labour, and manure was plentiful, has deprived such soils of the factitious value they possessed previously to 1846; and the ordnance valuation here requires correc-

tion. Intending purchasers would do well also to ascertain the capabilities of land for the growth of flax and green crops, especially beet, the culture of which is increasing throughout this country. Turbary, too, has of late years assumed a certain commercial value in situations where facilities of transport are available, occasioned by the increasing demand for peat charcoal; but under the ordnance valuation, although contiguous arable land is estimated at a certain enhanced price, in consequence of the vicinity of fuel, the bog itself has only been assigned a separate or independent value for the qualities of its grazing surface.

It is further to be observed that in the counties of Antrim, Derry, Tyrone, Armagh, and Down, the rent value of land is about $12\frac{1}{2}$ per cent. higher in proportion to the ordnance valuation than elsewhere; but this increment of value, resulting altogether from the industrial character of the population in connection with the linen manufacture, has not been taken into calculation, because flax was not included amongst the agricultural commodities in the standard scale of the Act.

Again, in Roscommon the converse of this is true, the rent-value being $12\frac{1}{2}$ per cent. lower in proportion to the ordnance valuation than elsewhere, in consequence of the destructive process of burning the surface generally prevailing in that county; for this, by injuring the productivity, depreciates the letting price below that of land better farmed, though not superior in intrinsic value.

With these qualifying observations, I would recommend any intending purchaser to examine personally, or by the intervention of an experienced friend or valuator, any estate or lot he means to bid for, referring to the Ordnance Map to show the position and boundaries, and to Griffith's Townland Valuation as a safe authority for estimating value.*

The amount of Poor Law taxation, now happily diminishing throughout Ireland, will not be a serious discouragement when it is considered that the very circumstance of an independent and employing capitalist becoming the proprietor of a hitherto insolvent estate, must necessarily result in the reduction of local taxation. But purchasers should look closely to the condition of land as respects drainage, farm buildings, or excessive population; the expenditure necessary to remedy imperfections in such matters being, in reality, an essential element of price.

The schedule of prices in the ordnance (or townland) valuation, and the average for the first nine months of this year, are here stated, from comparison of which with the valuation of any townland, the present annual letting value can be easily computed. The scale adopted in the Act last passed is not given, as its utility to the land market will not be generally available for several years; the only districts as yet completed under this Act being the municipal borough of Cork, four baronies in Kerry, one in Limerick, and one in Tipperary.†

* The Ordnance Maps may be had at Hodges and Smith's, Dublin, for 2*s.* 6*d.*, or 5*s.* the sheet. The valuations may be inspected at the office of the General Survey and Valuation of Ireland, in Dublin. It is manifest that the townland valuation does not apply where the lot is only a part of any townland, but this very seldom occurs.

† Glenarought, Corkaguiny, Dunkerron North and Dunkerron South, in Kerry; Iffa and Offa West, in Tipperary; and Glenquin, in Limerick.

TABLE I.

Scale of Prices adopted under the Townland Valuation, 6 & 7 Wm. IV. c. 84.

Per cwt. of 112 lbs.

1. Wheat.	2. Oats.	3. Barley.	4. Potatoes.	5. Butter.	6. Beef.	7. Mutton.	8. Pork.	9. Flax.
s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	Not included in Schedule.
10 6	6 0	7 0	1 7	69 0	33 0	34 6	25 6	

TABLE II.

Average of Four Markets—Dublin, Belfast, Cork, and Mullingar—from January to September, 1852, both inclusive.

Per cwt. of 112 lbs.

1. Wheat.	2. Oats.	2. Barley.	4. Potatoes.	5. Butter.	6. Beef.	7. Mutton.	8. Pork.	9. Flax.
s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
8 6½	5 9¼	6 0¼	3 9½	69 9	47 0	50 2¼	37 0½	49 10 Return from Belfast only.

On comparing these tables it will be seen, at a glance, that the townland valuation is a perfectly safe measure of annual value, with the qualifying observations before stated.

It will be expected, perhaps, that some definite opinion should be here given as to the rates of purchase, but there are so many modifying local circumstances to be considered in each case, that any fixed estimate would be incapable of general application. The published rentals, when representing the rents previously to 1846, are in such instances usually fallacious, and we may therefore refer to the Government valuations. From 21 to 25 years' purchase of the net annual value is a moderate scale in Leinster and Ulster, with exception of Monaghan and Cavan, where land is somewhat lower than in the other counties; finding this net value by deducting the tithe rent-charge and half the poor's rate from the government valuations,* the full amount of poor's rate being averaged at 2*s.* 8*d.* in the pound annually. A similar estimate may be also assumed in Waterford and the eastern half of Cork. In the remaining counties of Munster, and in Connaught, from 17 to 22 years' purchase may be estimated as a safe investment, finding the net value as before, and the poors' rate being averaged at 5*s.* in the pound annually. These are, however, but very loose approximations. The estate, or lot, should be personally inspected, and considered in every aspect, from its geological

* The townland (or ordnance) valuation has been completed in twenty-six counties, as already stated. In the remaining six counties the tenement valuation (where published) may be made equally available, the results of both being nearly identical, inasmuch as the scale of the townland valuation differs very little from the average prices of 1846, upon which the latter valuation, or rent-estimate of tenements, has been founded.

structure to its marketable position. The capitalist, or farmer, intending to settle in Ireland, will generally find estates divided into large farms with substantial buildings, in Leinster. In Ulster (excepting Donegal) the rents are comparatively higher, though quite as well paid as in Leinster, but the land is much subdivided throughout all the manufacturing districts of the former province. In Munster and Connaught (especially in the counties of Galway and Mayo) the enterprising agriculturist will find large tracts in the market, abundant in all the elements of undeveloped fertility, inviting the outlay of capital.

Then it must be borne in mind, that land in this country is valued lower in comparison with its productive capabilities than land in England, the superior farming of the latter causing the actual produce per acre to exceed our returns by about one-third. From this it is easily apprehended how agricultural skill applied to our lands will yield the purchaser an increased per-centage on his investment, or, in other words, reduce the number of years' purchase, as estimated on the increased productive value under improved culture.

The advantageous circumstances of freedom from the burdens of the income-tax and of certain assessed taxes, and the higher negociable value given to land by an indefeasible parliamentary title, and a simple mode of transfer, unclogged by the expenses, uncertainties, and delays of disabling laws, must also prove a great encouragement to the investment of capital in Ireland.

Looking with calm unprejudiced eye on the circumstances that rendered the downfall of a numerous proprietary an inevitable consequence of the failure of a single crop, and again, on those complicated inconveniences and discouragements involved in our legal systems of inheritance and land tenure, the capitalist, now investing his earnings or accumulations, may render himself and successors in a great measure independent of those evils that have so deformed and disorganized our social and civil condition in Ireland.

The incoming purchaser may forestall the advantages of that reform, to which the landed interest, under the increasing exigencies of popular progress, must ultimately yield. Unfettered by conditions imposed before he was born, and now totally unsuitable to changed men and times, he may grant judicious and equitable tenures, calculated to secure his tenants in the profits of their industry, without trenching on the rights of ownership, and so advance in his allotted sphere the prosperity of the commonwealth, as well by extending employment as by the increase of the products of the soil. And reflecting upon the ruin of Irish proprietors, he will not probably be inclined to impose on his heirs and successors disproportionate incumbrances and restrictive stipulations, from which he himself is happily free.

The neglected tenantry of disqualified or insolvent proprietors having seldom any security for their improvements, will, it is natural to expect, do as little for the land, and take as much out of it, as they can. And so it is. They become reckless and altogether unlinked from the social chain, although happily agrarian outrages have almost ceased—the seven millions and a quarter of property sold under the Incumbered Estates Commission, representing a population of at least 350,000 souls, affording only two instances of agrarian crime within a period of three years.

Men of capital and intelligence settling in Ireland, either as proprietors or farmers, receive cheerful welcome from all classes; nor are there any general causes of complaint or dissatisfaction on the part of those English capitalists who have already purchased upwards of 400,000 acres in the Incumbered Estates Court.

History affords no parallel instance of so extensive a field for investment in land, combined with such facilities for its acquisition, as is now presented within a few hours' distance of the wealthiest country in the world; and it is hoped that the foregoing observations may afford some useful information on the subject.

Note.—The purchase of unencumbered fee-simple estate *only* has been considered in this paper, with the view of affording the basis for a correct general estimate of value. As to the marketable prices of land held under other tenures, or of estates burdened with head rents, annuities, jointures, or the like, the reader is referred to the evidence of Sir M. Barrington and of the Author of this Paper, taken last May, before the Select Committee of the House of Lords on the Consolidated Annuities (Ireland) Bill; and which is further corroborated by full statistical tables, exhibiting the comparative results of sales.—See Report of Committee, and Blue Book containing the evidence in detail.

MISCELLANEOUS.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

First Ordinary Meeting. Twentieth Session.

Monday, the 15th day of November, 1852.

The Right Honorable Lord Overstone, President, in the Chair.

The President opened the Meeting with an Address, in which he referred to the severe loss which the Society had sustained in the decease of G. R. Porter, Esq., F.R.S., the late Treasurer, and of Joseph Fletcher, Esq., late one of the Honorary Secretaries.

The Right Honorable Lord Wodehouse was admitted a Fellow of the Society.

The Secretary announced numerous valuable Donations to the Library.

The titles of the various Papers read before the Statistical Section of the British Association, at Belfast, were read, and will be found recited at length in the next page.

T. J. Brown, Esq., was elected a Fellow of the Society.

The following Papers were then read:—

1. On the History and Consumption of Tobacco. By John Crawford, Esq.
2. On the Valuation and Purchase of Land in Ireland. By John Locke, Esq., of Dublin.

Twenty-Second Meeting of the British Association for the Advancement of Science, held at Belfast, 1st—7th September, 1852. Section F. Statistics.

President.—His Grace the Archbishop of Dublin.

Vice-Presidents.—Lord Dufferin, James Heywood, Esq., M.P., F.R.S., Major Thomas A. Larcom, R.E., The Earl of Mayo, Lieutenant-Colonel Sykes, F.R.S., Valentine Whitla, Esq.

Members of Committee.—W. J. C. Allen, Esq., Richard Atkinson, Esq., Edward Barrington, Esq., Richard Barrington, Esq., William Bottomley, Esq., Rev. James Byrne, Edward Cheshire, Esq., C. Wentworth Dilke, Esq., Rev. John Edgar, D.D., Professor Fowler (Massachusetts), James Gibson, J. W. Gilbart, Esq., F.R.S., Edward Halsall, Esq., John Hancock, Esq., John Herdman, Esq., William Hogan, Esq., Thomas Hutton, Esq., D.L., T. E. Cliffe Leslie, LL.B., A. G. Malcolm, M.D., Henry M'Cormac, M.D., William M'Gee, M.D., Professor Moffett, LL.D., Professor More, James William Murland, Esq., William Neild, Esq., James Perry, Esq., William Wills, Esq.

Secretaries.—Professor Hancock, LL.D., James Macadam, jun., Esq., Professor Ingram, LL.D., F.T.C.D.

The following Papers occupied the attention of the Section, viz.:—

1. On the Census of the Islands of Bombay and Colaba, taken on the 1st of May, 1849, by Captain Baynes, Superintendent of Police. By Lieut.-Colonel Sykes, F.R.S.
2. On the Productive Industry of Paris. Communicated by the late G. R. Porter, Esq., F.R.S., Secretary to the Board of Trade.
3. The Abolition of Slavery considered with reference to the state of the West Indies since Emancipation. By W. Nelson Hancock, LL.D.
4. On the Laws of the Currency in Ireland, as exemplified in the changes that have taken place in the Amount of Bank Notes in Circulation in Ireland, since the passing of the Act in 1845. Part I. By J. W. Gilbart, Esq., F.R.S.
5. On Excessive Emigration and its Reparative Agencies in Ireland. By John Locke, Esq.
6. The Dangerous and Perishing Classes. By the Rev. John Edgar, D.D.
7. On the Laws of the Currency in Ireland, as exemplified in the changes that have taken place in the Amount of Bank Notes in Circulation in Ireland, since the passing of the Act of 1845. Part II. By J. W. Gilbart, Esq., F.R.S.
8. Statistics of the Revenues of the University and of some of the Colleges of Oxford, compiled from the Report of the Oxford University Commissioners. By James Heywood, Esq., M.P., F.R.S.
9. On the Progress of the Sewed Muslin Manufacture in Ireland. By Mr. Holden.
10. Statistics of the Island of Portsea. Communicated by the Portsmouth and Portsea Literary and Philosophical Society.
11. On the Present State of the Law of Settlement and Removal of Paupers in Scotland. By William P. Alison, M.D.
12. Should our Gold Standard of Value be maintained if Gold becomes depreciated in consequence of its discovery in Australia and California? By W. Neilson Hancock, LL.D.
13. An Abstract of the Report upon the Number and Condition of the Deaf and Dumb in Ireland, taken in connexion with the Census Commission in 1851. By W. R. Wylde, Esq.
14. On the Connexion of Atmospheric Impurity with Disease. By Henry M'Cormac, M.D.
15. The Sanitary State of Belfast, with suggestions for its improvement. By Andrew G. Malcolm, M.D.
16. On the Progress and Extent of Steamboat Building in the Clyde. By John Strang, LL.D.
17. A short Account of the Early Bills of Mortality in Dublin. By W. R. Wilde, Esq.

The next Meeting of the Association will be held at Hull.

SHIPPING AND TONNAGE OF VESSELS.

Parliamentary Return, June, 1852. No. 376.

A Return of the Total Number of Vessels, with the Amount of their Tonnage, that were Built and Registered in the several Ports of the British Empire in each Year from 1815 *to* 1852 *inclusive, distinguishing those Built in the United Kingdom, the Channel Islands, and the British Plantations respectively.*

Years ending 5th January	United Kingdom.		Channel Islands and Isle of Man.		British Plantations.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1815....	706	86,075	27	805	131	11,069	864	97,949
1816....	913	102,943	36	1,536	234	24,061	1,183	128,540
1817....	851	84,676	15	443	408	32,282	1,274	117,401
1818....	758	81,263	8	845	316	22,321	1,082	104,429
1819....	752	86,748	9	316	298	17,302	1,059	104,366
1820....	777	89,091	20	1,381	328	21,701	1,125	112,173
1821....	619	66,691	16	1,451	248	16,440	883	84,582
1822....	585	58,076	12	1,406	275	15,365	872	74,847
1823....	564	50,928	7	605	209	15,611	780	67,144
1824....	594	63,151	10	637	243	22,240	847	86,028
1825....	799	91,083	38	2,136	342	50,522	1,179	143,741
1826....	975	122,479	28	1,550	536	80,895	1,539	204,924
1827....	1,115	118,363	16	723	580	86,554	1,719	207,088
1828 ...	894	93,144	17	1,894	529	68,908	1,440	163,946
1829....	842	88,663	15	1,406	464	50,844	1,321	140,913
1830....	718	76,635	16	1,000	416	39,237	1,150	116,872
1831....	730	75,532	20	1,879	367	32,719	1,117	110,130
1832....	742	83,852	18	1,855	376	34,290	1,136	119,997
1833....	733	90,180	26	2,735	386	43,397	1,145	136,312
1834....	711	89,212	17	2,959	431	52,476	1,159	144,647
1835....	780	100,367	26	2,343	425	55,817	1,231	158,527
1836....	860	116,635	56	5,087	455	63,230	1,371	184,592
1837....	679	86,509	30	3,127	441	66,604	1,150	156,240
1838....	936	131,171	69	4,751	510	71,306	1,515	207,228
1839....	1,089	157,255	58	4,204	606	79,947	1,753	241,406
1840....	1,217	181,301	61	5,602	703	109,025	1,981	295,928
1841 ...	1,370	211,289	78	8,775	771	143,288	2,219	363,352
1842 ...	1,111	159,578	81	8,731	668	132,857	1,860	301,166
1843....	914	129,929	57	3,346	558	75,662	1,529	208,937
1844....	698	83,097	38	2,276	494	55,904	1,230	141,277
1845 ...	689	94,995	42	1,881	525	69,857	1,256	166,733
1846 ...	853	123,230	37	1,689	638	90,696	1,528	215,615
1847....	809	125,350	32	2,148	745	113,558	1,586	241,056
1848....	933	145,834	48	4,090	756	155,313	1,737	305,237
1849....	847	122,552	31	3,388	655	101,988	1,533	227,928
1850....	730	117,953	41	3,313	691	123,864	1,462	245,130
1851....	689	133,695	36	3,835	714	124,953	1,439	262,483
1852 ...	672	149,637	30	2,926	Returns incomplete.			

A Return of the Number of Vessels belonging to the several Ports of the British Empire, in each Year from 1814 *to* 1851, *inclusive; also the Amount of their Tonnage, and the Number of Men and Boys employed in Navigating the same.*

Years ending 31st December.	Vessels.	Tonnage.	Men.
1814	24,418	2,616,965	172,786
1815	24,860	2,681,276	177,309
1816	25,864	2,783,940	178,820
1817	25,346	2,684,986	171,013
1818	25,507	2,674,468	173,609
1819	25,482	2,666,396	174,318
1820	25,374	2,648,593	174,514
1821	25,036	2,560,203	169,179
1822	24,642	2,519,044	166,333
1823	24,542	2,506,760	165,474
1824	24,776	2,559,587	168,637
1825	24,280	2,553,682	166,183
1826	24,625	2,635,644	167,636
1827	23,199	2,460,500	151,415
1828	24,095	2,518,191	155,576
1829	23,453	2,517,000	154,808
1830	23,721	2,531,819	154,812
1831	24,242	2,581,964	158,422
1832	24,435	2,618,068	161,634
1833	24,385	2,634,577	164,000
1834	25,055	2,716,100	168,061
1835	25,511	2,783,761	171,020
1836	25,820	2,792,646	170,637
1837	25,037	2,791,018	173,506
1838	26,609	2,890,601	178,583
1839	27,745	3,068,433	191,283
1840	28,962	3,311,538	201,340
1841	30,052	3,512,480	210,198
1842	30,815	3,619,850	214,609
1843	30,983	3,588,387	213,977
1844	31,320	3,637,231	216,350
1845	31,817	3,714,061	224,900
1846	32,499	3,817,112	229,276
1847	32,988	3,952,524	232,890
1848	33,672	4,052,160	236,069
1849	34,090	4,144,115	237,971
1850	34,288	4,232,962	239,283
1851	34,244	4,332,085	240,928

A Return of the Tonnage of Shipping employed in the Foreign Trade of the United Kingdom, which entered Inwards and cleared Outwards, in each Year from 1815 *to* 1851, *inclusive; distinguishing British and Foreign.*

Years.	Tonnage Inwards.			Tonnage Outwards.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
1815....	1,372,108	746,915	2,119,023	1,398,688	751,377	2,150,065
1816....	1,415,723	379,465	1,795,188	1,340,277	399,160	1,739,437
1817....	1,625,121	445,011	2,070,132	1,558,336	440,622	1,998,958
1818....	1,886,394	762,457	2,648,851	1,715,488	734,649	2,450,137
1819....	1,809,128	542,684	2,351,812	1,562,332	556,511	2,118,843
1820....	1,668,060	447,611	2,115,671	1,549,508	433,328	1,982,836
1821....	1,599,274	396,256	1,995,530	1,488,644	383,786	1,872,430
1822....	1,664,186	469,151	2,133,337	1,539,260	457,542	1,996,802
1823....	1,740,859	582,996	2,323,855	1,546,976	563,571	2,110,547
1824....	1,797,320	759,441	2,566,761	1,657,533	746,707	2,404,240
1825....	2,144,598	958,132	3,102,730	1,793,994	905,502	2,699,496
1826....	1,950,630	694,116	2,644,746	1,737,425	692,440	2,429,865
1827....	2,086,898	751,864	2,838,762	1,887,682	767,821	2,655,503
1828....	2,094,357	634,620	2,728,977	2,006,397	608,118	2,614,515
1829....	2,184,535	710,303	2,894,838	2,063,179	730,250	2,793,429
1830....	2,180,042	758,828	2,938,870	2,102,147	758,368	2,860,515
1831....	2,367,322	874,605	3,241,927	2,300,731	896,051	3,196,782
1832....	2,185,980	639,979	2,825,959	2,229,269	651,223	2,880,492
1833....	2,183,814	762,085	2,945,899	2,244,274	758,601	3,002,875
1834....	2,298,263	833,905	3,132,168	2,296,325	852,827	3,149,152
1835....	2,442,734	866,990	3,309,724	2,419,941	905,270	3,325,211
1836....	2,505,473	988,899	3,494,372	2,531,577	1,035,120	3,566,697
1837....	2,617,166	1,005,940	3,623,106	2,547,227	1,036,738	3,583,965
1838....	2,785,387	1,211,666	3,997,053	2,876,236	1,222,803	4,099,039
1839....	3,101,650	1,331,365	4,433,015	3,096,611	1,398,096	4,494,707
1840....	3,197,501	1,460,294	4,657,795	3,292,984	1,488,888	4,781,872
1841....	3,361,211	1,291,165	4,652,376	3,429,279	1,336,892	4,766,171
1842....	3,294,725	1,205,303	4,500,028	3,375,270	1,252,176	4,627,446
1843....	3,545,346	1,301,950	4,847,296	3,635,833	1,341,433	4,977,266
1844....	3,647,463	1,402,138	5,049,601	3,852,822	1,444,346	5,297,168
1845....	4,310,639	1,735,079	6,045,718	4,235,451	1,796,136	6,031,587
1846....	4,294,733	1,806,282	6,101,015	4,393,415	1,921,156	6,314,571
1847....	4,942,094	2,253,939	7,196,033	4,770,370	2,312,793	7,083,163
1848....	4,565,533	1,960,412	6,525,945	4,724,027	2,056,654	6,780,681
1849....	4,884,210	2,035,690	6,919,900	4,785,428	2,299,060	7,084,488
1850....	4,700,199	2,400,277	7,100,476	4,742,345	2,662,243	7,404,588
1851....	4,938,386	2,933,708	7,872,094	4,882,490	3,225,614	8,108,104

A Return of the Tonnage of Shipping employed in the Foreign Trade of the United Kingdom, exclusive of Vessels in Ballast which entered Inwards and cleared Outwards in each Year, from 1827 *to* 1851, *inclusive; distinguishing British and Foreign.*

Years.	Tonnage Inwards.			Tonnage Outwards.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
1827.....	1,998,554	733,600	2,732,154	1,257,941	423,712	1,681,653
1828.....	2,005,472	587,545	2,593,017	1,375,236	363,925	1,739,161
1829.....	2,081,713	654,367	2,736,080	1,348,453	430,948	1,779,401
1830.....	2,043,394	696,500	2,739,894	1,432,948	484,634	1,917,582
1831.....	2,205,494	823,100	3,028,594	1,493,267	515,197	2,008,464
1832.....	1,937,336	558,772	2,296,108	1,635,741	465,970	2,101,711
1833.....	1,999,937	547,189	2,547,126	1,641,280	522,159	2,163,439
1834.....	2,109,216	732,162	2,841,378	1,640,568	543,487	2,184,055
1835.....	2,203,382	749,472	2,952,854	1,743,476	626,557	2,370,033
1836.....	2,255,114	877,315	3,132,429	1,828,844	666,611	2,495,455
1837.....	2,346,300	869,519	3,215,819	1,861,121	716,897	2,578,018
1838.....	2,464,844	1,036,984	3,501,828	2,061,701	858,012	2,919,713
1839.....	2,756,533	1,200,935	3,957,468	2,197,014	888,738	3,085,752
1840.....	2,807,367	1,297,840	4,105,207	2,408,792	983,834	3,392,626
1841.....	2,900,749	1,081,380	3,982,129	2,624,680	918,776	3,543,456
1842.....	2,680,838	974,392	3,655,230	2,734,983	956,591	3,691,574
1843.....	2,919,528	1,005,894	3,925,422	2,727,306	1,026,063	3,753,369
1844.....	3,087,437	1,143,897	4,231,334	2,604,243	1,075,823	3,680,066
1845.....	3,669,853	1,353,735	5,023,588	2,947,257	1,361,940	4,309,197
1846.....	3,622,808	1,407,963	5,030,771	3,091,348	1,377,777	4,469,125
1847.....	4,238,956	1,852,096	6,091,052	3,205,794	1,513,447	4,719,241
1848.....	4,020,415	1,559,046	5,579,461	3,553,777	1,497,460	5,051,237
1849.....	4,390,375	1,680,894	6,071,269	3,762,182	1,667,726	5,429,908
1850.....	4,078,544	2,035,152	6,113,696	3,960,764	1,946,214	5,906,978
1851.....	4,388,245	2,599,988	6,988,233	4,147,007	2,336,137	6,483,144

A Return of the Tonnage of Vessels employed in the Coasting Trade, (including the Trade between Great Britain and Ireland,) which entered Inwards and cleared Outwards in each Year, from 1814 *to* 1851, *inclusive.*

Years.	Tonnage Inwards.	Tonnage Outwards.	Total.
1824	8,222,190	8,620,859	16,843,049
1825	8,408,211	8,267,397	16,675,608
1826	8,466,255	8,791,062	17,257,317
1827	8,327,097	8,777,921	17,105,018
1828	8,959,910	9,089,685	18,049,595
1829	9,066,086	9,285,327	18,351,413
1830	9,240,140	9,564,637	18,804,777
1831	9,279,308	9,488,981	18,768,289
1832	9,588,004	10,026,297	19,614,301
1833	9,434,232	10,023,614	19,457,846
1834	9,875,647	10,290,173	20,165,820
1835	10,188,916	10,660,330	20,849,246
1836	10,337,545	10,762,690	21,100,235
1837	10,409,370	10,901,187	21,310,557
1838	10,491,752	10,825,523	21,317,275
1839	10,610,404	11,266,073	21,876,477
1840	10,766,056	11,417,991	22,184,047
1841	10,869,071	11,650,252	22,519,323
1842	10,785,450	11,302,657	22,088,107
1843	10,822,176	11,321,138	22,143,314
1844	10,964,707	11,694,861	22,659,568
1845	12,485,854	13,114,104	25,599,958
1846	11,985,409	12,981,456	24,966,865
1847	12,219,796	13,265,625	25,485,421
1848	12,523,872	13,315,350	25,839,222
1849	11,967,473	12,915,584	24,883,057
1850	12,564,631	13,640,526	26,205,157
1851	12,394,902	13,466,115	25,861,017

SHIPPING.

Parliamentary Return, February, 1852. No. 218.

A Return of the Shipping employed in the Trade of the United Kingdom, which entered Inwards and cleared Outwards in 1851, *distinguishing British and Foreign, also Steam and Sailing Vessels, and the Trade with each Country.*

	Inwards.							
	British.				Foreign.			
	Steam.		Sailing.		Steam.		Sailing.	
	Ships.	Tonnage.	Ships.	Tonnage.	Ships.	Tonnage.	Ships.	Tonnage.
Russia	26	10,657	1,682	348,648	...	...	1,106	245,572
Sweden	21	5,145	274	49,017	...	...	750	136,490
Norway	...	...	46	5,180	...	...	1,282	213,011
Denmark	83	27,752	122	16,834	14	3,403	1,849	140,741
Prussia	...	...	1,005	141,884	7	1,645	1,603	278,091
Germany	366	124,124	1,052	203,163	170	55,188	1,663	150,725
Holland	884	224,020	872	121,583	136	31,318	940	117,894
Belgium	321	69,311	360	29,954	88	22,151	324	46,332
Channel Islands	373	61,517	1,584	119,526	...	...	22	2,621
France	1,665	285,999	3,335	327,470	2	149	3,462	268,492
Portugal, &c.	7	1,313	735	71,536	...	...	79	9,261
Spain, &c.	4	425	573	65,845	1	301	151	19,901
Gibraltar	34	10,615	14	1,689	...	...	1	81
Italian States	32	10,135	604	90,583	...	...	344	76,164
Malta	...	...	59	11,091	...	...	5	964
Ionian Islands	...	...	99	16,790	...	...	3	816
Greece	...	...	148	20,274	...	...	16	2,778
Turkey	39	18,695	241	46,465	...	...	175	44,084
Wallachia, &c.	...	...	225	39,884	...	...	282	60,020
Syria	5	1,668	55	10,646	...	...	17	4,082
Africa	29	20,169	664	182,616	...	...	326	95,338
Asia	1	941	826	433,078	...	...	65	37,620
America, viz.—								
British Northern Colonies	..	...	2,106	874,042	...	...	217	98,931
British West Indies	12	13,586	790	207,059	...	...	37	9,610
Foreign West Indies	2	2,510	240	59,348	...	...	171	42,015
United States	57	61,584	334	189,416	37	48,029	772	624,645
Mexico	...	...	17	5,611	...	...	3	522
Central and Southern States	20	22,870	809	262,499	...	...	166	44,723
The Whale Fisheries	...	...	50	13,619	...	...	...	...
	Outwards.							
Russia	27	11,104	1,292	270,823	...	...	558	119.001
Sweden	22	5,390	214	37,390	...	...	431	66,269
Norway	...	...	53	6,976	...	...	1,392	236,075
Denmark	52	17,052	492	78,971	15	3,469	3,660	399,993
Prussia	...	...	799	111,302	7	1,645	1,181	209,814
Germany	372	125,306	1,070	209,384	174	56,153	1,767	152,395
Holland	687	174,194	825	111,029	136	31,981	725	57,108
Belgium	357	81,907	252	7,236	113	25,418	149	20,123
Channel Islands	370	60,112	1,288	82,218	...	...	1	64
France	1,585	269,316	2,820	329,187	2	149	3,323	250,154
Portugal, &c.	7	1,325	716	75,337	...	...	306	62,190
Spain, &c.	3	265	930	159,387	2	581	428	83,651
Gibraltar	36	11,275	111	14,221	...	...	51	11,641
Italian States	36	11,677	636	105,351	...	...	622	148,446
Malta	...	...	146	32,727	...	...	197	53,273
Ionian Islands	...	...	65	13,674	...	...	27	7,679
Greece	...	...	66	9,416	...	...	81	21,445
Turkey	42	19,472	277	53,391	...	...	329	87,832
Wallachia, &c.	...	...	127	20,317	...	...	51	8,789
Syria	10	3,437	49	8,456	...	...	7	1,857
Africa	29	20,911	598	164,305	...	...	305	85,824
Asia	8	3,503	941	513,379	...	...	114	57,313
America, viz.—								
British Northern Colonies	1	190	1,513	587,211	...	...	78	29,477
British West Indies	1	907	816	116,766	...	...	21	5,359
Foreign West Indies	26	29,341	330	88,192	...	...	224	54,554
United States	58	62,811	869	450,694	38	50,004	992	773,138
Mexico	...	...	41	10,007	...	...	2	665
Central and Southern States	12	12,545	669	179,263	1	110	197	51,975
The Whale Fisheries	...	...	52	13,840	...	...	...	...

HOPS.

Parliamentary Return, February, 1852. No. 205.

A Return of the Total Number of Acres of Land in the United Kingdom under the Cultivation of Hops in the Year 1851.

Collections.	Number of Acres.	Collections.	Number of Acres.	Collections.	Number of Acres.
ENGLAND:		ENGLAND, *cont.d.*		ENGLAND, *cont.d.*	
Barnstaple	4¾	Lincoln	33	Taunton	9
Canterbury	8,623¼	Middlesex	10	Wales, Middle	15½
Cornwall	2¼	Northampton	2	Ware	6
Derby	22	Reading	6	Worcester	1,028¼
Dorset	4	Rochester	15,276¾		
Essex	135½	Sheffield	183¾	Total	43,246¼
Gloucester	15½	Shrewsbury	3		
Hants	1,618½	Stourbridge	482½	SCOTLAND	Nil.
Hereford	4,756¾	Suffolk	134¾		
Isle of Wight	1,109	Surrey	109	The Duty on Hops does not extend to IRELAND.	
Leicester	1¾	Sussex	9,653½		

A Return of the Duty on Hops of the Growth of the Year 1851, *distinguishing the Districts, and the Old from the New Duty in each District.*

Districts.	Old Duty, at 1 12/20 d. per lb.			New Duty, at ¾ 8/20 d. per lb.			Additional Duty at 5 per Cent. per Act 3 Vict. c. 17.			Total Amount of Duty.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Barnstaple	12	13	11¾ 8/20	10	2	6 12/20	1	3	8¾	25	0	2¾
Canterbury	22,368	17	1¼ 16/20	16,533	10	0½ 4/20	1,944	11	7½	40,846	18	9½
Cornwall	1	1	9 4/20	0	16	0¾ 16/20	0	1	10¼	1	19	8¼
Derby	41	10	2¼ 16/20	30	13	7½ 4/20	3	12	1½	75	15	11½
Dorset	2	18	11¾ 6/20	2	3	7 14/20	0	5	1½	5	7	8½
Essex	534	0	6¼ 8/20	394	14	3½ 12/20	46	8	5¼	975	3	3¼
Gloucester	60	3	11¼ 16/20	44	9	10½ 4/20	5	4	8	109	18	6
Hants	6,413	17	2¾	4,740	13	7¼	557	12	6¾	11,712	3	4¾
Hereford	13,782	4	3 16/20	10,186	17	0¾ 4/20	1,198	0	11	25,167	2	3
Isle of Wight	4,725	11	8¼ 8/20	3,492	16	5½ 12/20	410	17	5¼	8,629	5	7¼
Leicester	5	4	6½ 12/20	3	17	3¼ 8/20	0	9	1	9	10	11
Lincoln	76	18	10½ 16/20	56	17	5¼ 4/20	6	13	9¼	140	10	1¼
Middlesex	20	10	10 4/20	15	3	7¾ 16/20	1	15	8½	37	10	2½
Northampton	1	11	9¾ 4/20	1	3	6 16/20	0	2	9	2	18	1
Reading	28	12	8¼ 12/20	21	3	3½ 8/20	2	9	9½	52	5	9½
Rochester	49,492	3	2¾ 8/20	36,581	3	3 12/20	4,303	1	9	90,376	8	3
Shrewsbury	1	11	10¾ 16/20	1	3	7 4/20	0	2	9¼	2	18	3¼
Sheffield	277	3	0½ 6/20	204	17	0¼ 14/20	24	1	7¼	506	1	8¼
Stourbridge	1,315	14	8 16/20	972	9	11¾ 4/20	114	7	5½	2,402	12	1½
Suffolk	571	3	10¾ 12/20	422	3	9 8/20	49	13	3	1,043	0	11
Surrey	163	17	9¼ 16/20	121	2	8½ 4/20	14	4	11½	299	5	5½
Sussex	25,790	8	5¼ 8/20	19,062	9	8½ 12/20	2,242	1	1	47,094	19	3
Taunton	12	2	3 16/20	8	19	0¾ 4/20	1	1	0¾	22	2	4¾
Ware	20	14	5¾	15	6	4¼	1	16	0½	37	16	10½
Wales, Middle	43	1	4 16/20	31	16	7¾ 4/20	3	14	10¼	38	12	10¼
Worcester	3,815	13	5 8/20	2,820	5	6¾ 12/20	331	14	3¾	6,967	13	3¾
Total	129,580	13	0¾ 8/20	95,777	0	1 12/20	11,265	8	8¾	236,623	1	10¾

A Return of the Quantity of Hops Exported from the United Kingdom to Foreign Countries in the Year ending the 5th of January, 1852, *distinguishing the Countries to which the same have been Exported.*

Country to which Exported.	Year ending the 5th January, 1852.
	Cwts. qrs. lbs.
Hanseatic Towns	49 2 20
Belgium	81 1 4
France	15 3 27
British Possessions in South Africa	23 0 14
British Territories in the East Indies	15 0 7
British Settlements in Australia	92 3 20
United States of America	655 3 16
Total	933 3 24

A Return of the Quantity of Foreign Hops Imported into the United Kingdom in the Year ending the 5th of January, 1852, *distinguishing the Ports where Imported, and the Countries from whence Exported.*

Ports into which Imported.	Year ending the 5th Jan., 1852.	Countries from which Imported.	Year ending the 5th Jan., 1852.
	Cwts. qrs. lbs.		Cwts. qrs. lbs.
		Sweden	55 3 1
London	311 2 22	Holland	13 0 25
		Belgium	238 1 16
Liverpool	75 1 12	France	72 1 6
		Gibraltar	4 0 11
Hull	70 1 26	Van Diemen's Land	0 1 10
		Canada	2 0 18
Southampton	4 0 11	United States	75 1 12
Total	461 2 15	Total	461 2 15

A Return of the Number of Pounds Weight of Hops charged with Duty in each of the several Collections of the United Kingdom, in the Year 1851.

Collections.	Pounds Weight of Hops Charged with Duty.	Collections.	Pounds Weight of Hops Charged with Duty.
	Lbs.		Lbs.
Barnstaple	2,859	Reading	5,976
Canterbury	4,668,283	Rochester	10,328,799
Cornwall	227	Shrewsbury	333
Derby	8,663	Sheffield	57,841
Dorset	615	Stourbridge	274,588
Essex	111,449	Suffolk	119,206
Gloucester	12,563	Surrey	34,203
Hants	1,338,545	Sussex	5,382,349
Hereford	2,876,288	Taunton	2,528
Isle of Wight	986,209	Ware	4,325
Leicester	1,091	Wales, Middle	8,988
Lincoln	16,058	Worcester	796,314
Middlesex	4,287		
Northampton	332	Total	27,042,919

EXCISE AND CUSTOMS.

Parliamentary Return, February, 1852. No. 138.

A Return of the Annual Charge for the Collection of the Excise Duty for each Year from 1842 *to* 1851 *inclusive, also the Number of Men Employed in the Department on the 5th day of January in each Year, together with the Names of any Articles on which the Duties have been Repealed.*

Years.	Annual Charge for Collection of Excise Duties.			Number of Persons Employed.	Name and Amount of Duties Repealed.
	£	*s.*	*d.*		
1842.....	823,682	6	8	6,774	
1843.....	825,993	16	8	6,801	
1844.....	818,483	16	8	6,838	Duty on Vinegar repealed—Amount £25,000.
1845.....	809,114	4	7	6,516	Duty on Sales by Auction and on Glass repealed—Amount £1,132,000.
1846.....	772,680	9	5	6,427	
1847.....	755,269	14	11	6,813	
1848.....	753,236	10	4	6,006	
1849.....	711,017	5	5	5,608	
1850.....	692,217	0	3	5,472	Duty on Bricks repealed—Amount £462,000.
1851.....	673,826	18	4	5,457	

A Return of the Annual Charge, for each Year from 1842 *to* 1851 *inclusive, for the Collection of the Customs Revenue.*

Years.	Annual Charge for Collection of Customs' Duty.	Years.	Annual Charge for Collection of Customs' Duty.
1842.....	£1,254,590	1847.....	£1,304,173
1843.....	1,254,136	1848.....	1,312,710
1844.....	1,264,996	1849.....	1,301,727
1845.....	1,279,944	1850.....	1,283,805
1846.....	1,264,273	1851.....	1,290,756

Duties of Customs wholly Repealed.

Date of Repeal	Articles.	Estimated Net Annual Produce of the respective Duties previous to their Repeal.	
		£	£
1842...	Per-centage duty on British goods exported ...	109,778	
„	Woollen and worsted yarn exported	2,153	
„	Wool and skins exported to British possessions	316	
1843...	Nil.		112,247
1844...	Wool, sheep's, Foreign, imported	97,140	
„	Wool and skins exported to Foreign countries	3,682	
			100,822
1845...	Brimstone, unrefined	14,572	
„	Bristles in any way assorted or arranged in colours	25,076	
„	Iron in bars unwrought	22,492	
„	Mahogany	12,734	
„	Oil, olive	23,413	
„	Silk, raw	17,520	
„	„ thrown, not dyed	20,982	
„	Wood, staves not exceeding 72 inches long	38,252	
„	Wool, cotton	682,042	
„	Coals exported in British ships	115,438	
„	Other articles on each of which the estimated loss is less than 10,000*l.*	170,498	
			1,143,019
1846...	Oxen and bulls	10,231	
„	Woollen manufactures not made up	27,970	
„	Other articles on each of which the estimated loss is less than 10,000*l.*	23,311	
			61,512
1847...	Nil.		
1848...	Nil.		
1849...	Oil, spermaceti, of Foreign fishing	29,327	
„	Other articles	75	
			29,402
1850...	Coals, culm and cinders exported in Foreign ships	2,944	
„	Other articles	134	
			3,078
1851...	Nil.		
	Aggregate of Customs' Duties wholly repealed in the Ten Years from 1842 to 1851 inclusive		1,450,080

SPIRITS.

Parliamentary Return, February, 1852. No. 232.

A Return of the Number of Gallons of Proof Spirits permitted out *of Distillers' and Rectifiers' Stocks in England, for Home Consumption; also, the Number of Proof Gallons of Rum received* into *Rectifiers' Stocks in England, Scotland, and Ireland, for the Year ending 5th January*, 1852.

Year ending the 5th of January.	England.				Proof Gallons of Rum received *into* Rectifiers' Stocks in			
	Gallons of Proof Spirits Permitted *out* of Distillers' Stocks.	Proof Gallons Permitted *out* of Rectifiers' Stocks.						
		British Brandy.	Spirits of Wine.	Total.	England.	Scotland.	Ireland.	Total.
1852....	6,048,436	387,722	272,931	6,709,089	44,563	3,622	875	49,060

A Return of the Number of Proof Gallons of Spirits Distilled in England, Scotland, and Ireland; distinguishing the Quantities in each Country delivered Duty-paid direct from Distillers' Stocks, from the Quantities put into Bond, for the Year ending the 5th of January, 1852.

Year ending the 5th of January, 1852.	Number of Gallons.			
	Distilled.	Delivered Duty-paid direct from Distillers' Stocks	Put into Bond.	Total.
England	6,127,181	6,073,834	53,347	12,254,362
Scotland	10,380,972	3,540,688	6,840,284	20,761,944
Ireland	8,035,504	1,775,253	6,260,251	16,071,008
Total	24,543,657	11,389,775	13,153,882	49,087,314

A Return of the Number of Proof Gallons of British Compounds and Spirits of Wine permitted from Rectifiers' Stocks in England, Scotland, and Ireland, for Exportation to Foreign Ports, under Drawbacks, for the Year ending the 5th of January, 1852.

Year ending the 5th of January, 1852.	Number of Gallons.
England	43,984
Scotland	10,353
Ireland	..
Total	54,337

A Return of the Number of Gallons of Spirits in Bonded Stores in England, Scotland, and Ireland, respectively, on the 5th of January, 1852, (*in continuation of Parliamentary Paper, No.* 238, *of Session* 1851).

Year ending the 5th of January, 1852.	Number of Gallons.
England	106,815
Scotland	1,523,335
Ireland	5,394,163
Total	7,024,313

Parliamentary Return, May, 1852.

No. 363.

A Return of the Number of Gallons of Spirits Distilled and Charged with Duty for Home Consumption in the United Kingdom, in each Year, from 1800 *to* 1851, *both inclusive.*

Years.	Number of Imperial Gallons of Spirits Distilled in			
	England.	Scotland.	Ireland.	The United Kingdom.
1800....	4,352,788	1,277,696	No Returns	No Returns
1801....	2,478,289	295,931		
1802....	3,384,742	1,344,835	4,475,458	9,205,035
1803....	4,184,034	2,247,000	4,795,109	11,226,143
1804....	2,586,586	2,478,003	4,205,830	9,270,419
1805....	2,869,520	2,617,508	4,611,734	10,098,762
1806....	2,425,007	2,788,274	4,059,914	9,273,195
1807....	3,581,043	3,397,204	5,305,632	12,283,879
1808....	3,847,127	3,589,435	4,524,475	11,961,037
1809....	3,307,039	2,610,512	1,288,758	7,206,309
1810....	3,898,966	2,171,513	4,301,026	10,371,505
1811....	4,116,833	2,859,861	6,187,779	13,164,473
1812....	3,938,793	3,001,677	4,053,600	10,994,070
1813....	3,859,095	1,842,817	3,595,030	9,296,942
1814....	3,670,714	2,988,323	5,947,658	12,606,695
1815....	3,402,489	3,024,430	4,468,106	10,895,025
1816....	3,486,478	2,145,366	4,562,286	10,194,130
1817....	2,907,732	3,060,499	2,692,182	8,660,413
1818....	3,782,512	3,062,820	4,474,777	11,320,109
1819....	2,815,716	3,547,199	3,879,216	10,242,131
1820....	2,866,684	3,278,129	4,607,296	10,752,109
1821....	2 662,852	3,216,858	3,627,552	9,507,262
1822....	3,181,026	3,337,850	4,135,045	10,653,921
1823....	2,134,913	3,083,515	2,844,677	8,063,105
1824....	2,894,309	5,908,373	6,361,248	15,163,930
1825....	2,039,771	8,224,807	8,835,027	19,099,605
1826....	3,209,044	8,563,994	9,046,959	20,819,997
1827....	3,451,620	7,243,819	7,283,317	17,978,756
1828....	3,974,785	10,117,047	9,725,259	23,817,091
1829....	3,860,542	9,649,070	9,208,538	22,718,150
1830....	4,656,443	9,883,413	8,694,742	23,234,598
1831....	3,444,792	9,510,268	8,786,341	21,741,401
1832....	3,788,068	7,979,088	9,260,920	21,028,076
1833....	4,591,223	9,146,889	9,509,774	23,247,886
1834....	4,652,838	9,193,091	9,370,343	23,216,272
1835....	4,327,425	9,133,449	11,167,580	24,628,454
1836....	5,088,340	10,222,650	11,894,169	27,205,159
1837....	4,614,196	9,012,485	10,980,910	24,607,591
1838....	5,776,411	9,047,199	11,064,820	25,888,430
1839....	5,685,698	9,871,653	10,254,591	25,811,942
1840....	5,918,435	8,821,530	7,281,429	22,021,394
1841....	5,919,207	8,504,333	6,359,124	20,782,664
1842....	6,008,456	7,658,985	5,315,090	18,982,531
1843....	5,800,509	7,650,272	5,550,706	19,001,487
1844....	5,433,843	8,321,306	6,878,243	20,633,392
1845....	5,866,593	9,418,663	8,397,459	23,682,715
1846....	5,624,868	9,735,303	8,658,879	24,019,050
1847....	5,356,794	8,542,219	5,737,687	19,636,700
1848....	5,503,238	9,600,321	8,126,507	23,230,066
1849....	5,573,411	10,846,634	8,355,083	24,775,128
1850....	5,913,424	11,638,429	8,293,034	25,844,887
1851....	6,127,181	10,380,972	8,035,504	24,543,657

KING'S COLLEGE LIBRARY

Parliamentary Return, May, 1852.

No. 363.

A Return of the Number of Gallons of Spirits Distilled and Charged with Duty for Home Consumption in the United Kingdom, in each Year, from 1800 *to* 1851, *both inclusive.*—Continued.

Years.	Number of Imperial Gallons of Spirits charged with Duty for Consumption in			
	England.	Scotland.	Ireland.	The United Kingdom.
1800....	4,352,888	1,277,596	1,330,500	6,960,984
1801....	2,555,920	295,931	355,106	3,206,957
1802....	3,981,072	1,158,558	4,715,098	9,854,728
1803....	5,370,377	2,022,409	4,343,095	11,735,881
1804....	3,690,745	1,889,757	3,543,599	9,124,101
1805....	4,932,645	1,625,987	3,686,233	10,244,865
1806....	4,094,985	1,812,237	3,858,107	9,765,329
1807....	4,747,365	2,653,478	5,597,204	12,998,047
1808....	5,390,884	2,683,342	3,575,430	11,649,656
1809....	4,035,825	1,315,135	1,360,386	6,711,346
1810....	4,787,555	1,748,140	4,728,522	11,264,217
1811....	4,776,330	1,951,092	6,378,479	13,105,901
1812....	5,242,470	1,687,905	4,009,301	10,939,676
1813....	4,292,477	1,234,291	3,158,693	8,685,461
1814....	4,956,965	1,474,187	5,393,713	11,824,865
1815....	5,468,987	1,591,148	4,323,844	11,383,979
1816....	4,745,484	918,859	3,557,200	9,221,543
1817....	4,133,063	1,906,950	3,586,932	9,626,945
1818....	5,259,662	2,066,988	4,284,347	11,610,997
1819....	4,146,505	2,125,150	3,676,516	9,948,171
1820....	4,284,798	1,863,987	3,299,650	9,448,435
1821....	4,125,616	2,385,495	3,311,462	9,822,573
1822....	4,694,055	2,225,124	2,910,483	9,829,662
1823....	3,803,312	2,303,286	3,590,376	9,696,974
1824....	4,392,611	4,350,301	6,690,315	15,433,227
1825....	3,684,049	5,981,549	9,262,744	18,928,342
1826....	7,407,204	3,988,788	6,834,867	18,230,859
1827....	6,671,562	4,752,199	8,260,664	19,684,425
1828....	7,759,687	5,716,180	9,937,903	23,413,770
1829....	7,700,766	5,777,280	9,212,224	22,690,270
1830....	7,732,101	6,007,631	9,004,539	22,744,271
1831....	7,434,047	5,700,689	8,710,672	21,845,408
1832....	7,281,900	5,407,097	8,657,756	21,346,753
1833....	7,717,303	5,988,556	8,168,596	21,874,455
1834....	7,644,301	6,045,043	9,708,416	23,397,760
1835....	7,315,053	6,013,932	11,381,223	24,710,208
1836....	7,875,702	6,620,826	12,248,772	26,745,300
1837....	7,133,869	6,124,035	11,235,635	24,493,539
1838....	7,930,490	6,259,711	12,296,342	26,486,543
1839....	8,186,552	6,188,582	10,815,709	25,190,843
1840....	8,278,148	6,180,138	7,401,051	21,859,337
1841....	8,166,985	5,989,905	6,485,443	20,642,333
1842....	7,956,054	5,595,186	5,290,650	18,841,890
1843....	7,724,051	5,593,798	5,546,483	18,864,332
1844....	8,234,440	5,922,948	6,451,137	20,608,525
1845....	9,076,381	6,441,011	7,605,196	23,122,588
1846....	9,179,530	6,975,091	7,952,076	24,106,697
1847....	8,409,165	6,193,249	6,037,383	20,639,797
1848....	8,581,327	6,548,190	7,072,933	22,202,450
1849....	9,053,676	6,935,003	6,973,333	22,962,012
1850....	9,331,512	7,122,987	7,408,086	23,862,585
1851....	9,595,368	6,830,710	7,550,518	23,976,596

MILITIA.

Quotas of Militia Men to be raised in the several Counties, Ridings, and Places in England and Wales in the Years 1852 *and* 1853.

England.	1852.	1853.	Total.
Bedford	345	210	555
Berks	483	295	777
Bucks	466	283	749
Cambridge	520	316	836
Chester	1,275	774	2,049
Cornwall, exclusive of the Stannaries	757	460	1,217
The Stannaries	225	137	362
Cumberland	545	331	876
Derby	851	516	1,367
Devon, exclusive of the Stannaries	1,473	894	2,367
The Stannaries (see Cornwall)			
Dorset	506	308	814
Durham	1,096	666	1,762
Essex	1,049	637	1,686
Gloucester	1,240	753	1,993
Hereford	335	203	538
Hertford	477	289	766
Huntingdon	184	112	296
Kent	1,618	982	2,600
Lancaster	5,628	3,418	9,046
Leicester	650	395	1,045
Lincoln	1,174	712	1,886
Middlesex, exclusive of the City of London and Tower Hamlets	3,197	1,942	5,139
City of London	600*	....	600
Tower Hamlets	1,442	876	2,318
Monmouth	467	283	750
Norfolk	1,224	744	1,968
Northampton	606	368	974
Northumberland	834	506	1,340
Nottingham	761	462	1,223
Oxford	481	292	773
Rutland	68	41	109
Salop	658	400	1,058
Somerset	1,211	735	1,946
Southampton	1,080	656	1,736
Stafford	1,784	1,083	2,867
Suffolk	949	577	1,526
Surrey	1,852	1,125	2,977
Sussex	945	573	1,518
Warwick	1,336	812	2,148
Westmorland	167	102	269
Wilts	725	441	1,166
Worcester	789	478	1,267
York, East Riding	608	369	977
York, North Riding and City	733	445	1,178
York, West Riding	3,760	2,284	6,044
Wales.			
Anglesey	159	97	256
Brecon	178	108	286
Cardigan	187	114	301
Carmarthen	302	184	486
Carnarvon	241	147	388
Denbigh	269	163	432
Flint	197	119	316
Glamorgan	676	410	1,086
Merioneth	110	66	176
Montgomery	194	118	312
Pembroke	239	145	384
Radnor	74	45	119
Grand Total	50,000	30,000	80,000

* Act of 1 Geo. IV., c. 100.

RAGGED SCHOOLS.

A Return of the Number of Ragged Schools, and of the Teachers and Children therein, for London and its Environs, from the Ragged School Union; also the Money collected for the same.

Years.	Schools.	Voluntary Teachers.	Paid Teachers.	Total Teachers.	Children.	Money Collected.
1845	20	200	....	200	2,000	£ 61
1846	26	250	....	250	2,600	320
1847	44	450	....	450	4,700	637
1848	62	822	80	902	7,000	696
1849	82	829	124	953	9,000	3,632
1850	95	1,392	167	1,559	10,900	2,658
1851	102	1,341	180	1,521	11,500	2,072
1852	110	1,650	200	1,850	13,700	2,813

THE MARRIAGES, BIRTHS, AND DEATHS, REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND.

The Marriages for the Quarter ending the 31st of March, and the Births and Deaths for the Quarter ending the 30th of June, 1852,

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

THIS return comprises the births and deaths registered by 2,190 registrars in all the districts of England during the Spring quarter ending June 30th, 1852; and the marriages in more than 12,000 churches or chapels, about 3,228 registered places of worship unconnected with the Established Church, and 623 superintendent registrars' offices, in the quarter that ended March 31st, 1852.

The return of marriages is not complete; but the defects are inconsiderable, and approximative numbers have been supplied from the records of previous years.

The general results of the return are not unsatisfactory; the marriages exceed the average number, the births are above, the deaths are but slightly above the average of the kingdom.

MARRIAGES.—The marriages in the quarter ending March 31st were 32,933, consequently in the three months 65,866 persons were married; this slightly exceeds the numbers in the corresponding quarter of 1851, and is 10,906, or one-fifth part, more than the numbers married in the winter quarter of 1847.

Marriages, Births, and Deaths, returned in the Years 1840-52 and in the Quarters of those Years.

YEARS.....	1840	1841	1842	1843	1844	1845	1846	1847	1848	1849*	1850	1851	1852
Marriages	122665	122496	118825	123818	132249	143743	145664	135845	138230	141883	152738	153740	...
Births	502303	512158	517739	527325	540763	543521	572625	539965	563059	578159	593422	616251	...
Deaths	359687	343847	349519	346445	356933	349366	390315	423304	399833	440853	368986	395933	...
	MARRIAGES.												
Quarter ending the last day of													
March	26395	24447	25860	25285	26387	29551	31417	27480	28398	28429	30567	32619	32933
June	30786	32551	30048	31113	34268	35300	37111	35197	34721	35844	39204	38498	...
September	29221	29397	27288	28847	31675	35003	35070	32439	32995	33874	37636	37155	...
December	36263	36101	35629	38573	39919	43889	42066	40729	42116	43736	45331	45468	...
	BIRTHS.												
March	132305	133720	135615	136837	143578	143080	145108	146453	139736	153772	144551	157374	161776
June	129059	129884	134096	131279	136941	136853	149450	139072	149760	153693	155865	159138	159136
September	119822	123868	123296	128161	130078	132369	138718	127173	140359	135223	146911	150584	...
December	121117	124686	124732	131048	130166	131219	139349	127267	133204	135471	146095	149155	...
	DEATHS.												
March	98896	99069	96314	94926	101024	104664	89484	119672	120032	105871	98418	105446	106682
June	90339	86134	86538	87234	85337	89149	90231	106718	99727	102153	92875	99639	100813
September	80822	75440	82339	76792	79708	74872	101663	93435	87638	135235	85846	91600	...
December	89630	83204	84328	87493	90864	80681	108937	103479	92436	97594	91847	99248	...

* The numbers up to 1849 have appeared in the Annual Reports.

The rate of marriages, after allowing for increase of population, is found to exceed the average of the season, and is only less than it was in the winter quarters of 1846 and 1851. The excess is distributed over nearly all the divisions of the country, but is most conspicuous in London, where the marriages in the winter quarter increase from 4,377 in 1849 to 5,576 in 1852. Marriages increased in St. George, Hanover-square, and in Hastings, Brighton, Bath, Clifton, and other watering places. The marriages in the South-eastern division also increased in Surrey, Sussex, and Hampshire; decreased in Berkshire. There was an increase in Oxford and Cambridge; in Colchester and in Norwich; in Malmesbury and in Bradford (Wilts); also in Exeter; in Redruth, Cornwall, and in Bristol; in Hereford, Shrewsbury, and Stafford; in Wolstanton and Burslem among the Staffordshire

Potteries. The marriages in Birmingham were 390, or 44 less than in the previous winter. In Leicester and Nottingham the number of marriages has, for the last two years, exceeded the average. The marriages in the last quarter were also over the average in the districts of Derbyshire, in Stockport, Liverpool, Prescot, Wigan, Warrington, and Manchester. In Sheffield marriages were numerous; in several districts of Yorkshire below the average. In the northern counties the marriages exceeded the average; in Wales they declined from 1,930 in 1851 to 1,804 in the winter quarter of 1852.

Births.—The births of 159,136 children, born alive, were registered in the quarter ending June 30th, 1852. The same number, within two, was registered in the spring quarter of last year. The proportion of births to the population since 1849 has greatly exceeded the average of previous years.

Increase of Population.—As the births in the quarter were 159,136, the deaths 100,813, the increase of population by natural causes is 58,323. The increase in the previous quarter was 55,094; in the corresponding quarter of 1851, 59,499. In the quarter ending June 30th, 1852, 125,112 emigrants sailed from the ports of the United Kingdom at which there are emigration agents; 21,890 sailed from Irish ports, 8,687 from the Scotch ports of Glasgow and Greenock, and 94,535 from English ports; namely, 3,224 from Plymouth, 15,304 from London, and 76,007 from Liverpool.* It is known that a large but unknown proportion of the emigrants from Liverpool are of Irish origin; but the birthplace is not distinguished in the abstracts.

The price of provisions has varied little during the quarter; mutton and beef have, however, been a little cheaper than they were in the previous quarter; the price of wheat remains 40*s.* 10*d.* a quarter.

The Average Prices of Consols, Wheat, Meat, and Potatoes, also the Average Quantity of Wheat sold and imported Weekly, in the four last Quarters ending the 30th of June, 1852.

Quarters ending	Average Price of Consols.	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase).		Potatoes (York Regents) per Ton at Waterside Market, Southwark.
			Average Number of Quarters Weekly.		Beef.	Mutton.	
1851							
Sept. 30.	96½	40*s.* 7*d.*	74,714	91,040	3*d.*—5*d.* Mean 4*d.*	3¾*d.*—5¾*d.* Mean 4¾*d.*	90*s.*—110*s.* Mean 100*s.*
Dec. 31.	97⅞	36*s.* 7*d.*	109,506	47,986	3*d.*—5*d.* Mean 4*d.*	3¾*d.*—5¾*d.* Mean 4¾*d.*	65*s.*—75*s.* Mean 70*s.*
1852							
Mar. 31.	97¼	40*s.* 10*d.*	95,532	27,540	3¼*d.*—5*d.* Mean 4⅛*d.*	3¾*d.*—5¾*d.* Mean 4¾*d.*	60*s.*—80*s.* Mean 70*s.*
June 30.	99⅝	40*s.* 10*d.*	87,949	54,675	3¼*d.*—4¾*d.* Mean 4*d.*	3¾*d.*—5¼*d.* Mean 4½*d.*	85*s.*—110*s.* Mean 97*s.* 6*d.*

Note.—The total number of quarters of wheat sold in England and Wales for the 13 weeks ending September 30th, was 971,276; for the 13 weeks ending December 31st, 1,423,582; for the 13 weeks ending March 31st, 1,241,921; for the 13 weeks ending June 30th, 1,143,339. The total number of quarters entered for Home Consumption was, respectively, 1,183,523; 671,803; 358,024; and 710,780; the second total, however, embraces the returns of 14 weeks. The price of potatoes in the quarter ending September, refers to the period during which the old supply continued.

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* From a return with which the Registrar General has been favoured by the Emigration Commissioners.

KING'S

State of the Public Health.—The deaths in the spring quarter were 100,813, and the mortality was at the rate of 2·227 per cent. per annum, which is slightly above the average of the season. The excess of deaths was chiefly in the town districts, which still maintain their fatal pre-eminence over the country in destroying the lives of the population. The rate of mortality in the 506 districts, comprising chiefly small towns and country parishes, was 2·052; in the 117 town districts 2·436; so that out of the same population for every 4 deaths in the districts where the air and water are comparatively pure, there are nearly 5 deaths in London and our other towns, where all the sanitary arrangements are still left so imperfect that no improvement sensibly affecting the rate of mortality has hitherto been effected. In the three months that have elapsed 48,357 deaths have been registered in the town districts in the place of 40,000, who would have died if the mortality had not exceeded 2 per cent.; a standard of salubrity by no means high or unattainable. The season has been unusually cold, but food has been abundant, and from the notes of the Registrars generally it may be inferred that the people are actively employed.

In London 13,173 deaths were registered in the 13 weeks; 2,828 were ascribed to zymotic diseases, 443 to violence, privation, cold, or intemperance. 19 deaths were caused by poisons, 5 by laudanum, 3 by oxalic acid, 3 by essential oil of almonds, and 2 by prussic acid. Two of the deaths were ascribed to overdoses of laudanum; the others were cases of suicide, and included 7 males, 4 females, of ages ranging from 18 to 70. One death was referred to Coutt's oil, 1 to improper medicine, 1 to lead (a painter, age 36), and 3 to poisoning by accident. It is gratifying to observe that no case of death by arsenic has been registered in London. Of intemperance 20 died, 39 of delirium tremens, of privation 8, cold 5, burns and scalds 50, hanging, strangling, and suffocation 78, drowning 59, fractures and contusions 121, wounds, gunshot and others, 19, other violence 15.

Small-pox, scarlatina, hooping-cough, and typhus, have prevailed to some extent, not only in London but in many parts of the country, and persons, with families, who are about to visit strange districts in search of health, will obtain information from the notes of the Registrar, or by local inquiries, which may prevent their exposure to local epidemics.

The following is one example, among many, of the efficacy of vaccination:—

"Totnes, Buckfastleigh.—A case of virulent small-pox was introduced in March last into a thickly-populated part of this town from Plymouth, (where numbers have suffered, and its fatality has been great,) by clothes brought hither, and worn by a child about 5 years old, who took the infection, but passed well through the disease. No other case appeared, the juvenile population having been immediately vaccinated to the number of 400, or nearly a fifth of the whole."

Much good has already been effected by the enforcement of sanitary regulations in the lodging-houses of the country. The Registrar of North Saint Giles says, "There is a decrease of one-fifth in the deaths as compared with those of the corresponding quarter of last year, which I attribute to the sanitary arrangements enforced by the police, in making the landlords of the houses in Church-lane and the Rookery whitewash and cleanse them, and not allowing above a certain number of persons to sleep in the lodging-houses."

Deaths in the Spring Quarters.

	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	Total. 1842–51	1852
In 117 Districts, comprising the chief towns	38569	40343	38977	40847	43737	51585	46552	48070	42886	47774	439340	48357
In 506 Districts, comprising chiefly small towns and country parishes	47969	46891	46360	48302	46494	55133	53178	54083	49989	51865	500264	52456
All England ...	86538	87234	85337	89149	90231	106718	99730	102153	92875	99639	939604	100813

Population, Deaths, and Mortality per cent. in the Spring Quarters of 11 *Years*, 1842-52.

	Population Enumerated		Annual Rate of Mortality of 10 Spring Quarters, 1842–51.	Annual Rate of Mortality in the Spring Quarter, 1852.
	June 6–7th, 1841.	March 31st, 1851.		
In 117 Districts, comprising the chief towns	6,612,958	7,795,882	2·417	2·436
In 506 Districts, comprising chiefly small towns and country parishes.....	9,301,190	10,126,886	2·048	2·052
All England	15,914,148	17,922,768	2·216	2·227

The Registrars of Saint Ann, Nottingham, and of Cardiff in South Wales, have recorded similar good effects from the supervision of the low lodging-houses.

Public attention has been before called in these periodical reports to the neglect and ill-usage of children in the large towns of the country, and more particularly in Lancashire, where the mortality of children under 5 years of age is twice as high as it is in the healthiest counties, and much higher than it is in London. This subject is so important that it is thought right to insert here a paper by Mr. Leigh, one of the Registrars of Manchester, who has described the circumstances of his own sub-district accurately, and, it is believed, of many of the other districts of the county by which he is surrounded.

Observations on the Causes of Death, the Mortality, and the Treatment of Children, in Deansgate Sub-district, Manchester.—By John Leigh, Registrar, M.R.C.S., &c., &c.

Mr. Leigh formerly noticed, that in Manchester great numbers of the children died without ever being seen by a medical man; since the regulations respecting the certificates of death by qualified medical men, there has been a considerable change. He now adds:—

"The first thing that strikes me is the great increase of cases in which the causes of deaths were certified by medical men, the total number of uncertified cases being only 49 out of 252 deaths; and the next is the ever-recurring fact, that nearly all the uncertified cases were those of children, viz., 41 out of the 49. At the first aspect one would be led to the inference that medical assistance was more generally sought for sick children now than was the case some years ago. This improvement, however, I am sorry to say, is more apparent than real. Since the establishment of the certificate system the poor have got an impression that the production of a medical certificate will facilitate the registration of their children, and still further will aid them in obtaining club-money for the interment. The consequence is, that though in the earlier stages of their diseases the children are still taken, as generally as heretofore, to druggists and unlicensed practitioners, yet when it becomes apparent that their condition is hopeless, and that they are dying, a rush is made to some medical man who, on death taking place, furnishes a certificate, stating, to the best of his belief, what was the disease under which the little sufferer laboured when brought to him. I am strongly of opinion that though a greater number of certificates are brought to the Registrar, there is no actual extension of medical attendance on the suffering children of the poor. It is only necessary to glance over the assigned causes of death among children to feel how true is this observation: 21 deaths from measles, 22 from pneumonia, 16 from diarrhœa, 20 from convulsions, and 21 from marasmus. No medical man can read such a list without entire conviction that the bulk of these

lives might have been saved by proper treatment promptly bestowed. With the exception of the cases of marasmus, three-fourths of which are brought about by improper diet, opiates, and foul air, and of convulsions, the constant sequence of anodyne administrations, nearly all are remediable complaints. The suggestion of a remedy for the evils themselves is difficult. So long as ignorance and credulity prevail, so long will blind faith be placed in the assertions and promises of the bold charlatan, rather than in the observing and inquiring student. The uneducated, whether rich or poor—and they are to be found in all ranks—ever prefer the specious to the real, and seek that which comes by extraordinary means rather than in the common course of nature. So long as a demand for opiates exists, no matter to what purpose applied, and money is to be made by selling them, so long will persons engage in the trade, and so long will thousands of children helplessly perish who ought to have grown up men and women, the bulwarks of the state.

"How far the evil might be mitigated by medical men themselves, by an extension of eleemosynary aid, it is difficult to say, for the poor cannot pay medical fees; in many cases they will not pauperise themselves by applying to the parish surgeon, and the profession already contributes more to the relief of the poor than any other body in society. Still there stands out the naked fact that, in this district alone, out of 252 deaths 135 were those of children under the age of 5 years.

"The classification of the diseases of adults suggests reflections, some of a very satisfactory, others of an unsatisfactory nature. It is gratifying to observe, that though 333 children have been born within this district within the last three months, only two of the mothers have died from any diseases which had connexion with their births. The improvements which have taken place in the treatment of parturient women during this century are beyond all praise, and the care and skill which are brought to the aid of woman in the time of her greatest tribulation, and particularly the abstinence from injudicious and unnecessary interference, have been attended with the happiest results. How wonderfully do the tables of mortality from parturition and the diseases connected with it contrast now with those of the last century! To pass from this agreeable reflection, how much it is to be regretted that such a want of precision should characterise the medical certificates which come to the hands of the Registrar. The best opportunity the profession ever enjoyed for collecting the statistics of disease is, in a great measure, lost by the apathy with which it seems to be regarded. There is no attempt at precision in filling up the medical certificates; and the carelessness with which this is done, or with which the cases have been examined, becomes strikingly apparent when the causes of death are classified. Out of 53 deaths of adults from diseases of the lungs 23 are certified to have been from phthisis, 23 from bronchitis, 2 from catarrh, 3 from asthma, and 1 from disease of the lungs of uncertain nature, and only 1 from pneumonia. Pneumonic inflammation must be very common amongst labourers employed in the open air, subject to all the vicissitudes of the weather, and yet it is not recorded as it ought to be, nor the condition of the lungs as the sequence of that inflammation. Not a single case of death occurs from emphysema of the lungs, nor from bronchitis complicated with emphysema. One might suppose such a disease did not exist, and yet there are entire trades in Manchester, almost every member of which, above the age of 40 years, is affected with emphysema of the lungs. It is one of the commonest affections we have. Men who work in dust, as fustian cutters, cotton carders, &c., are almost invariably affected with it. Not long ago, in examining a number of men of this class who proposed to assure their lives, I found about 8 out of 12 to be so affected more or less.

"We hear nothing of consolidation, or of anything but bronchitis and phthisis. It may be added that out of 252 persons who have died within the district within the last three months, not one has been subjected to a post-mortem examination.

"In the last century and the beginning of this, copious nosologies were presented to medical men, and under some one heading it was expected that they would be able, with moderate precision, to place each case as it occurred. Sauvage, Cullen, and Mason Good were respectively the nosological chiefs of their respective times; but as words and systems do not keep pace with science, the latter has advanced beyond the nosologies, which have shared the fate of the systems on which they were based. Recently a tabulation of disease, divested, to a large extent, of technicality, or of such technicality as would bind it to a system, has been presented to medical men by the

Registrar General, which, whilst it possesses great simplicity, has shown its adaptation to the wants of the times by its all but universal adoption where nosology is employed.

"I have ventured to call attention, by these remarks, to the facilities afforded for describing or specifying disease by the system of registration, in consequence of the scanty nosology which medical men appear to have thought sufficient for the Registrar's certificates. Should the stethoscope be thrown aside as of no value when diseases of the lungs and heart are to be examined and recorded? What mean such terms as morbus cordis, disease of the heart? And how shall it be said that acute rheumatism is the cause of death? If the stethoscope tell no tale, should the scalpel reveal nothing?

"Manchester is one of the best paved and best drained towns in England, as regards the streets; and the corporation, with a laudable regard for the comforts and condition of the inhabitants, has been as careful to pave and drain the small streets, lanes, and alleys, as the great public thoroughfares; the smoke nuisance has been considerably mitigated; the streets, courts, and alleys are regularly and well swept; the cesspools and ashpits emptied and cleansed at reasonable periods; a good supply of water laid on, of pure quality; and, so far as the police of the town is concerned, every effort is made that can conduce to the well-being of its poorer inhabitants. And yet, with all this, there is no diminution of mortality; the mortality is relatively the same to the population, for the latter has scarcely changed during the last twenty years in my district. The causes of a high rate of mortality are not so much external to the dwellings of the poor as that they are to be found within them. Close, damp, ill-drained, and wretchedly ventilated cellars abound, even in tolerably wide, well-conditioned streets. The windows are often scarcely wide enough to admit light for ordinary purposes.*

"Unequal employment, frequent exposure to wet and cold, indifferent and scanty food, and imperfect medical attendance, are the great causes in operation. The mechanical influence of certain occupations in causing disease has not been sufficiently estimated here. The dust continually given off in fustian cutting, cotton carding, and similar occupations, and inhaled, and in a minor degree, the fuliginous particles with which the atmosphere is so generally loaded, are constant exciting causes of bronchial irritation. When received into the lungs they irritate the bronchial membrane, whose secretion is increased, and they are in part expectorated, but a considerable portion remains imbedded in the pulmonary structure, causing permanent irritation, partial consolidation, extensive emphysema, chronic bronchitis, and ultimately death. It is a common thing to find the bronchial glands and the pulmonary tissue perfectly black and inky, from the presence of carbonaceous matter. And those who work at the occupations specified above have emphysema, after a few years, almost to a man.

"John Leigh, Registrar,
"Deansgate Sub-district, Manchester."

* I am at this moment attending a child in a cellar which looks over a fine open piece of ground called Campfield. The cellar consists of two small rooms; the stench from the drains is intolerable, and such as I can scarcely bear in the room where the child lies; the back room has neither window nor door, and contains the necessary office and cesspool of the family. The child is ill of fever.

MORTALITY OF THE METROPOLIS.

A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending June of the Four Years, 1849–50–51–52.

CAUSES OF DEATH.	Quarters ending June			
	1849.	1850.	1851.	1852.
ALL CAUSES	13,008	11,238	13,093	13,173
SPECIFIED CAUSES	12,927	11,132	12,956	13,096
I. Zymotic Diseases	3,203	2,032	2,662	2,828
SPORADIC DISEASES.				
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	553	526	547	603
III. Tubercular Diseases	2,399	2,118	2,584	2,545
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,571	1,479	1,545	1,461
V. Diseases of the Heart and Blood-Vessels	487	472	508	520
VI. Diseases of the Lungs and of the other Organs of Respiration	1,922	1,726	2,117	2,088
VII. Diseases of the Stomach, Liver, and other Organs of Digestion	783	710	797	763
VIII. Diseases of the Kidneys, &c.	136	130	156	171
IX. Childbirth, Diseases of the Uterus, &c.	101	122	105	132
X. Rheumatism, Diseases of the Bones, Joints, &c.	92	102	101	105
XI. Diseases of the Skin, Cellular Tissue, &c	20	27	23	30
XII. Malformations	35	43	31	41
XIII. Premature Birth & Debility	298	288	360	381
XIV. Atrophy	263	239	318	305
XV. Age	465	484	540	573
XVI. Sudden*	172	180	105	107
XVII. Violence, Privation, Cold, and Intemperance	427	454	457	443
I. Small Pox	113	103	209	472
Measles	368	232	495	199
Scarlatina	497	284	169	563
Hooping Cough	739	406	734	466
Croup	91	82	67	96
Thrush	35	23	22	23
Diarrhœa	240	200	191	163
Dysentery	41	25	34	35
Cholera	268	9	3	8
Influenza	16	36	108	33
Purpura and Scurvy	14	13	11	21
Ague	9	3	5	5
Remittent Fever	22	27	28	32
Infantile Fever†	5	10	11	10
Typhus	512	426	428	483
Metria, or Puerperal Fever, see Childbirth	57	51	30	54
Rheumatic Fever, see Rheumatism	17	16	7	20
Erysipelas	114	103	74	98
Syphilis	43	28	31	43
Noma or Canker, see Mortification	2	5	5	4
Hydrophobia	..	..	..	..
II. Hæmorrhage	44	46	49	62
Dropsy	209	191	185	188
Abscess	15	17	23	34
Ulcer	16	8	8	14
Fistula	6	8	4	6
Mortification	42	25	51	34
Cancer	197	219	206	242
Gout	24	12	21	23
III. Scrofula	112	77	115	124
Tabes Mesenterica	196	173	190	194
Phthisis or Consumption	1,708	1,548	1,815	1,790
Hydrocephalus	383	320	464	437
IV. Cephalitis	151	137	154	127
Apoplexy	350	337	313	295
Paralysis	278	262	267	238
Delirium Tremens	33	41	32	39
Chorea	..	4	6	3
Epilepsy	74	64	91	95
Tetanus	7	6	9	11
Insanity	21	31	20	36
Convulsions	516	417	511	466
Disease of Brain, &c.	161	180	142	156
V. Pericarditis	34	26	32	37
Aneurism	26	24	14	19
Disease of Heart	427	422	462	464
VI. Laryngitis	44	60	52	64
Bronchitis	745	696	861	934
Pleurisy	48	35	35	49
Pneumonia	815	712	909	783
Asthma	152	127	151	139
Disease of Lungs, &c	118	96	109	119
VII. Teething	131	119	173	146
Quinsey	12	15	11	21
Gastritis	27	22	30	19
Enteritis	89	87	73	84
Peritonitis	59	55	51	50
Ascites	25	21	32	26
Ulceration (of Intestines, &c.)	27	22	23	34
Hernia	37	41	36	27
Ileus	37	36	42	30
Intussusception	15	13	10	15
Stricture of the Intestinal Canal	11	9	10	16
Dis. of Stomach, &c.	66	55	63	72
Disease of Pancreas	1	..	1	..
Hepatitis	39	60	49	47
Jaundice	44	23	45	40
Disease of Liver	160	128	144	130
Disease of Spleen	3	4	4	6
VIII. Nephritis	2	2	11	4
Nephria (or Bright's Disease)	35	34	32	47
Ischuria	2	2	3	2
Diabetes	12	9	10	11
Stone	5	7	9	11
Cystitis	9	10	7	6
Stricture of Urethra	10	5	7	20
Dis. of Kidneys, &c.	61	61	77	70
IX. Paramenia	1	3	3	4
Ovarian Dropsy	6	15	9	13
Childbirth, see Metria	59	59	52	76
Dis. of Uterus, &c.	35	45	41	39
X. Arthritis	1	3	4	3
Rheumatism	46	54	56	58
Disease of Joints, &c.	45	45	41	44
XI. Carbuncle	5	5	3	8
Phlegmon	8	12	6	8
Disease of Skin, &c.	7	10	14	14
XVII. Intemperance	13	23	16	20
Privation	13	4	5	8
Want of Breast Milk, see Privation & Atrophy	42	32	52	48
Neglect	4	..	..	1
Cold, see Privation	..	1	..	5
Poison	27	25	19	19
Burns and Scalds	52	63	48	50
Hanging, &c.	32	77	50	78
Drowning	67	61	70	59
Fractures and Contusions	139	131	159	121
Wounds	26	18	31	19
Other Violence	12	19	7	15
Causes not specified	81	106	137	77

* Under the head of "sudden deaths," are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

† In the years previous to 1848, "Worms" and "Infantile Fever" were classed together. The former, of rare occurrence, is now placed to diseases of stomach, &c.

Meteorological Table for the Quarter ending June 30, 1852.

NAMES OF THE PLACES.	Mean Pressure of Dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean daily Range of Temperature.	Mean monthly Range of Temp.	Range of Temperature in the Quarter.	Mean Temperat. of Evaporation.	Mean Temperature of the Dew Point.	WIND. Mean estimated Strength.	WIND. General Direction.	Mean Amount of Cloud.	RAIN. No. of days on which it fell.	RAIN. Amount collected.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional weight required to saturate a cubic Foot of Air.	Mean Degree of Humidity.	Mean whole amount of Water in a Vertical Column of Atmosphere.	Mean Weight of a Cubic Foot of Air.	Height of Cistern of Baromr. above level of the Sea.
	In.	°	°	°	°	°	°	°	°					In.	Gr.	Gr.		In.	Gr.	Feet.
Jersey	29·606	52·4	73·0	33·0	15·5	33·0	40·0	50·2	47·9	2·0	N.E. & S.W.	4·8	39	8·2	4·0	0·7	0·860	4·9	536	85
Guernsey	29·581	51·2	68·5	39·0	10·4	22·2	29·5	50·0	48·6	1·5	N.E. & S.W.	5·2	37	7·1	4·1	0·3	0·920	5·0	536	123
Helston	29·567	52·3	72·0	33·0	13·2	29·3	39·0	49·9	47·3	2·1	E. & S.W.	5·8	36	7·8	3·9	0·7	0·846	4·7	534	106
Truro	29·602	51·9	69·0	26·0	14·2	34·0	43·0	49·1	46·0	0·7	S.E. & S.W.	5·9	40	9·8	3·8	0·8	0·819	4·5	536	55
Torquay	..	50·2	62·0	36·0	6·5	17·7	26·0	46·7	42·9	2·2	N.E. & W.	..	38	10·3	3·1	0·9	0·777	4·1	..	160
Ryde	29·659	51·3	72·0	24·4	20·2	36·9	47·6	47·1	42·4	0·4	N.E. & S.W.	6·0	32	8·8	3·4	1·1	0·743	4·1	536	110
Exeter	29·607	51·4	..	..	17·7	..	..	48·1	44·6	..	.. ..	4·1	..	8·4	3·6	1·0	0·778	4·3	535	140
Ventnor	29·674	52·7	66·0	35·0	10·1	25·3	31·0	..	46·7	..	E. & S.W.	..	42	7·6	3·8	0·9	0·814	4·7	535	150
Chichester	..	51·5	73·0	30·0	16·6	33·7	43·0	..	43·3	..	N.E. & S.W.	..	..	..	..	..	..	..	..	23
Southampton	29·573	51·7	71·0	31·0	15·0	32·8	40·0	47·8	43·4	0·6	N.E. & S.W.	6.5	36	8·7	3·5	1·1	0·759	4·2	536	60
Royal Observatory	29·643	51·2	74·7	26·7	19·9	41·3	48·0	47·4	43·3	..	N.E. & S.W.	..	35	7·0	3·4	1·1	0·766	4·1	535	159
Chiswell Street Brewery	29·627	53·3	75·0	34·0	13·6	31·7	41·0	48·8	44·2	..	.. ..	..	40	7·1	3·6	1·3	0·736	4·3	534	96
St. John's Wood	29·640	50·7	73·0	27·5	16·7	38·2	45·5	47·1	42·1	1·5	N.E. & S.W.	8·8	38	7·8	3·4	1·0	0·771	4·1	536	150
Rose Hill	29·630	51·0	73·5	25·2	21·5	41·3	48·3	48·1	45·0	2·7	N.E. & S.W.	7·1	39	9·4	3·6	0·8	0·812	4·4	533	270
Thame	29·609	50·7	73·0	24·0	19·5	41·7	49·0	48·1	45·0	1·0	N.E. & S.W.	6·3	41	7·3	3·7	0·7	0·833	4·4	534	230
Radcliffe Observatory	29·640	50·6	71·1	25·3	18·0	38·8	45·8	46·8	42·6	2·0	.. ..	6·7	40	9·8	3·4	1·0	0·765	4·1	535	210
Stone Observatory	29·577	49·7	73·5	22·3	19·4	43·7	51·2	47·0	43·7	0·8	N.E. & S.W.	5·4	39	6·9	3·5	0·7	0·822	4·3	533	320
Hartwell House	29·590	50·8	79·0	24·5	20·5	46·6	54·5	47·3	43·3	1·2	N.E. & S.W.	6·6	..	..	3·4	1·1	0·774	4·2	533	250
Hartwell Rectory	29·577	50·6	73·7	27·0	19·3	40·9	46·7	48·2	45·6	1·0	N.E. & S.W.	5·4	43	7·0	3·7	0·7	0·844	4·5	532	290
Linslade	29·649	49·9	74·0	22·0	21·1	45·3	52·0	45·8	41·1	..	N.E. & S.W.	..	41	6·5	3·2	1·1	0·741	3·9	534	313
Royston	29·653	51·5	75·4	24·5	19·3	41·2	50·9	47·4	43·0	..	N.E. & S.W.	6·4	53	6·0	3·4	1·1	0·752	4·1	533	271
Cardington	29·608	50·9	76·0	22·0	19·4	43·1	54·0	47·8	44·4	0·9	E.N.E. & W.S.W.	6·1	36	6·4	3·6	0·9	0·802	4·3	536	100
Bedford	29·603	50·5	74·0	23·5	18·9	42·0	50·5	47·6	44·3	0·9	E.N.E. & S.S.W.	6·0	43	5·9	3·6	0·9	0·810	4·3	537	100
Norwich	29·567	50·3	79·0	26·0	17·0	41·7	53·0	48·1	45·5	1·5	N.E. & S.W.	6·8	35	4·6	3·8	0·6	0·849	4·5	538	39
Grantham	29·643	50·1	74·2	27·0	17·1	40·7	47·2	46·4	42·3	light	N.E. & S.W.	6·8	35	4·9	3·6	1·0	0·767	4·0	536	190
Derby	29·635	49·9	70·0	28·0	19·0	36·7	42·0	45·9	41·4	..	N.E.	..	37	4·9	3·2	1·0	0·751	3·9	538	100
Holkham	29·611	50·1	78·8	23·4	18·1	43·3	55·4	47·7	45·0	1·1	N.E. & S.W.	5·6	40	5·2	3·7	0·7	0·839	4·4	539	39
Highfield House	29·693	51·6	79·0	27·8	22·2	44·0	51·2	48·0	44·1	0·5	N.E.	6·9	42	6·8	3·5	1·0	0·777	4·3	535	103
Hawarden	29·591	49·9	71·5	31·0	14·7	33·0	40·5	46·6	42·8	1·7	N.E. & S.W.	6·5	45	7·2	3·4	1·0	0·789	4·1	533	260
Gainsborough	29·630	50·5	74·0	29·0	17·3	38·0	45·0	47·1	43·3	0·3	N.E. & S.	5·9	42	4·5	3·5	1·0	0·784	4·0	538	30
Liverpool	29·592	52·7	69·4	34·7	12·2	28·6	34·7	49·1	45·4	1·1	N.W. & S.E.	6·9	28	4·2	3·7	1·0	0·785	4·4	536	37
Manchester	29·650	51·4	78·0	29·0	22·8	43·5	49·0	47·8	42·4	..	N.E. & S.W.	7·0	36	6·6	3·3	1·5	0·697	4·1	534	137
Wakefield Prison	29·640	50·9	79·0	25·0	20·0	45·0	54·0	46·6	41·8	2·2	N.E. & S.W.	6·8	49	6·0	3·3	1·1	0·764	4·0	536	115
Leeds	29·614	50·7	77·0	24·0	21·0	43·5	53·0	46·0	40·8	2·2	N.E. & S.W.	6·7	41	4·4	3·2	1·2	0·723	3·8	536	138
Stonyhurst	29·618	48·8	74·1	27·0	17·4	40·0	47·1	45·5	41·6	2·1	N.E. & S.W.	6·8	39	7·0	3·3	1·2	0·784	3·9	535	381
York	29·599	49·3	72·0	27·0	15·4	36·8	45·0	46·1	42·4	..	S.E. & N.E.	..	35	4·7	3·4	0·8	0·793	4·0	539	50
Durham	29·624	47·9	69·3	30·6	13·3	35·2	38·7	45·6	42·8	1·1	Variable.	7·1	48	6·0	3·4	0·7	0·842	4·0	534	352
Newcastle	29 656	49·1	68·0	30·0	14·1	33·7	38·0	46·5	43·5	..	N.E. & S.W.	..	41	..	3·4	0·8	0·827	4·1	538	121
Glasgow	29·561	50·0	68·9	33·0	12·7	30·6	35·9	46·2	42·0	..	S.W. & N.E.	..	36	6·2	3·2	1·0	0·760	3·9	536	121
Dunino	29·563	49·9	78·0	29·0	19·0	39·3	49·0	46·2	42·2	1·9	N.E. & S.W.	4·5	28	5·9	3·3	1·0	0·776	4·4	534	250

REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 10th October, 1851-52; showing the Increase or Decrease thereof.—(*Continued from page* 284.)

[From the "London Gazette."]

Sources of Revenue.	Years ending 10th October.			
	1851.	1852.	Increase.	Decrease.
	£	£	£	£
Customs	18,798,262	18,713,510	....	84,752
Excise	13,256,120	13,370,305	114,185	....
Stamps	5,965,785	6,099,717	133,932	....
Taxes	4,301,093	3,143,892	....	1,157,201
Property Tax	5,355,697	5,409,355	53,658	....
Post Office	970,000	996,000	26,000	....
Crown Lands	170,000	220,000	50,000	....
Miscellaneous	162,058	292,295	130,237	....
Total Ordinary Revenue	48,979,015	48,245,074	508,012	1,241,953
Imprest and other Moneys	658,111	608,670	....	49,441
Repayments of Advances	565,688	911,673	345,985	....
Total Income	50,202,814	49,765,417	853,997	1,291,394
Deduct Increase				853,997
Decrease on the Year				437,397

Sources of Revenue.	Quarters ending 10th October.			
	1851.	1852.	Increase.	Decrease.
	£	£	£	£
Customs	5,335,073	5,036,809	....	298,264
Excise	4,139,854	4,303,755	163,901	....
Stamps	1,432,564	1,529,421	96,857	....
Taxes	165,025	159,215	....	5,810
Property Tax	1,870,136	1,915,581	45,445	....
Post Office	306,000	261,000	....	45,000
Crown Lands	40,000	40,000	....	....
Miscellaneous	28,452	17,799	....	10,653
Total Ordinary Revenue	13,317,104	13,263,580	306,203	359,727
Imprest and other Moneys	124,330	137,996	13,666	....
Repayments of Advances	165,255	234,042	68,789	....
Total Income	13,606,689	13,635,618	388,656	359,727
Deduct Decrease			359,727	
Increase on the Quarter			28,929	

Consolidated Fund Operations.—The total income brought to this account in the quarter ending 10th October, 1852, was 13,665,511*l.* The total charge upon it was 8,030,943*l.*, leaving a surplus of 5,634,568*l.*

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Third Quarter of 1852; *together with the Average Prices for the whole Quarter.*—(*Continued from p.* 285.)

Returns received at the Corn Office, Board of Trade.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
	Weekly Average	Aggregate Average of Six Weeks' regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending, 1852.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
July 3	41 4	40 10	27 5	19 10	32 4	33 1	33 2
10	41 5	41 0	28 3	19 9	32 6	34 0	33 3
17	41 0	41 0	27 0	19 11	30 1	34 5	30 11
24	40 7	41 0	28 2	19 9	28 9	33 10	34 5
31	40 0	40 10	27 8	20 6	29 11	34 2	33 5
August 7	39 7	40 8	27 3	20 0	29 7	33 9	30 6
14	39 7	40 4	27 5	19 6	30 3	33 7	31 4
21	41 2	40 4	27 4	19 3	29 4	33 2	29 10
28	43 7	40 9	28 2	20 3	29 9	34 4	31 1
September 4	44 9	41 5	28 2	20 5	31 3	34 10	31 6
11	42 5	41 10	27 10	18 10	30 9	34 5	31 9
18	40 5	42 0	27 4	18 7	30 1	34 4	29 10
25	39 6	42 0	27 5	17 11	31 0	33 10	29 10
Average for the Quarter	41 2	..	27 7	19 6	30 5	33 11	31 7

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th July, 5th August, and 5th September, 1852; *the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouse at the close of them.*—(*Continued from p.* 285.)

[From the "London Gazette."]

WHEAT.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1852.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th July	216,161	3,460	219,622	216,261	3,468	219,730	3,679	1	3,681
5th Aug.	266,802	8,388	275,191	266,852	8,388	275,241	3,629	1	3,631
5th Sept.	347,140	4,299	351,439	348,161	4,299	352,461	2,608	1	2,609

WHEAT-FLOUR.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1852.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th July	375,484	61,989	437,474	375,484	61,989	437,474	7	6	14
5th Aug.	383,191	103,503	486,694	383,191	103,503	486,694	7	6	14
5th Sept.	446,506	33,863	480,370	446,506	33,863	480,370	7	6	14

Fluctuations in the Stock and Share Market during Months of July, August, and September, 1852.—(*Continued from p.* 287).

Stocks and Shares.	Amount of Share.			Amount Paid.			Price on the			Highest Price during the Months of			Lowest Price during the Months of		
	July.	August.	September.	July.	August.	September.	31st July	2nd Aug.	1st Sept.	July.	Aug.	Sept.	July.	August.	Sept.
Consols	...	...	...	...	...	...	100 5/16	100 7/16	100⅛	100⅞	100½	100¼	100	98¼	99⅝
Exchequer Bills	(March.)	(March.)	(March.)	...	...	...	77½ Pm.	77½ Pm.	74½ Pm.	79*s.*	79*s.* Pm.	76*s.*	75*s.*	73*s.* Pm.	70*s.* Pm.
RAILWAYS—															
Brighton	Stock	Stock	Stock	Stock	Stock	Stock	108	107	104½	110½	107½	105⅓	107	102½	103¾
Caledonian	Stock	Stock	Stock	Stock	Stock	Stock	44½	42½	42	47⅛	43	45¼	41	37	41¼
Eastern Counties	Stock	Stock	Stock	20	20	20	10½	11⅜	11⅛	11¾	11⅜	11½	10½	9⅝	11
Great Northern	Stock	Stock	Stock	Stock	Stock	Stock	91	80½	78½	92	81	81	78½	71½	74½
Great Western	Stock	Stock	Stock	Stock	Stock	Stock	99	101	95¾	108	101	97¾	98⅛	91¼	95½
London and North-Western	Stock	Stock	Stock	Stock	Stock	Stock	130¾	127¼	122¾	135¼	127½	123⅝	129¾	119¼	116
Midland	Stock	Stock	Stock	Stock	Stock	Stock	74½	76½	76	80¼	76½	78½	73⅝	65	75⅝
Lancashire and Yorkshire	Stock	Stock	Stock	Stock	Stock	Stock	84¼	83¾	82½	88½	83¾	87⅛	82¾	74¾	82
North Staffordshire	20	20	20	17½	17½	17½	11½	13	12¾	13	13⅛	13¼	11¼	12⅛	12⅜
South-Eastern	Stock	Stock	Stock	Stock	Stock	Stock	73½	74	70½	78⅛	74½	72¾	72½	66¾	70⅜
South-Western	Stock	Stock	Stock	Stock	Stock	Stock	97½	97¼	92	103	97¼	94	97	84⅜	87½
York, Newcastle, & Berwick	Stock	Stock	Stock	Stock	Stock	Stock	75	74⅛	69	78¼	74¼	69	74⅓	65⅝	66
York and North Midland	Stock	Stock	Stock	Stock	Stock	Stock	53	54½	48½	55½	54½	49¾	51½	45	48¼
Northern of France	20	20	20	16	16	16	24⅛	26⅝	26¼	26¼	26¾	28½	24⅛	24⅞	26¼
East Indian	20	20	20	20	20	20	25½	27	28	27⅞	28	28½	25½	26⅛	27¾

Average Price of Meat as sold in Smithfield Market in the Months of July, August, and September, 1852.

[From Returns sent to the Board of Trade.]

Description.	July.	August.	Sept.	Description.	July.	August.	Sept.	Description.	July.	August.	Sept.
	s. d.	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*
Inferior Beasts	2 8	2 6	2 6	Inferior Sheep	3 0	3 0	3 4	Coarse Calves	3 4	3 0	2 10
2nd class	3 4	3 0	3 0	2nd class	3 6	3 4	3 8	Small Prime Calves	3 10	3 6	3 4
3rd class (Large Prime)	3 8	3 6	3 6	3rd do. (long coarse woolled)	3 10	3 8	4 0	Large Hogs	3 2	3 0	3 0
4th class	4 0	3 10	4 0	4th do. (South Down)	4 2	3 10	4 6	Small Neat Porkers	3 8	3 8	3 8
				Lambs	...	4 8	5 0				

N.B.—Price of Meat at the rate of 8 lbs. Avoirdupois to the stone, sinking the offal.

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 10th July, the 7th August, and the 4th September, 1852.—(Continued from p. 288.)

[From the "London Gazette."]

ISSUE DEPARTMENT.

	Weeks ending		
	10th July, 1852.	7th August, 1852.	4th Sept. 1852.
	£	£	£
Notes issued	35,878,765	35,156,170	35,354,075
Government Debt	11,015,100	11,015,100	11,015,100
Other Securities.....	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion	21,845,390	21,122,795	21,334,921
Silver Bullion.....	33,375	33,375	19,154
Total.....	35,878,765	35,156,170	35,354,075

BANKING DEPARTMENT.

Proprietors' Capital	14,553,000	14,553,000	14,553,000
Rest	3,159,913	3,285,396	3,549,003
Public Deposits.....	3,908,478	3,823,713	6,667,129
Other Deposits	15,429,582	13,885,973	12,136,546
Seven-Day and other Bills	1,333,416	1,432,737	1,425,278
Total.....	38,384,389	36,980,819	38,330,956
Government Securities	14,124,546	13,790,720	14,189,182
Other Securities.....	11,407,460	10,756,634	11,100,487
Notes	12,499,010	12,115,995	12,542,790
Gold and Silver Coin	353,373	317,470	498,497
Total.....	38,384,389	36,980,819	38,330,956

COUNTRY BANKS.

Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks, by which issued in each part of the Kingdom, during the months ending the 10th July, the 7th August, and the 4th September, 1852.—(Continued from p. 288.)

Banks.	10th July, 1852.	7th August, 1852.	4th September, 1852.
England—Private Banks	3,450,949	3,476,738	3,406,632
Joint Stock Banks	2,806,521	2,813,582	2,764,444
Scotland—Chartered, Private, and Joint Stock Banks.....	3,338,295	3,307,750	3,334,198
Ireland—Bank of Ireland, Private and Joint Stock Banks	4,406,173	4,396,505	4,508,701
Total.....	14,001,938	13,994,575	14,013,975

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